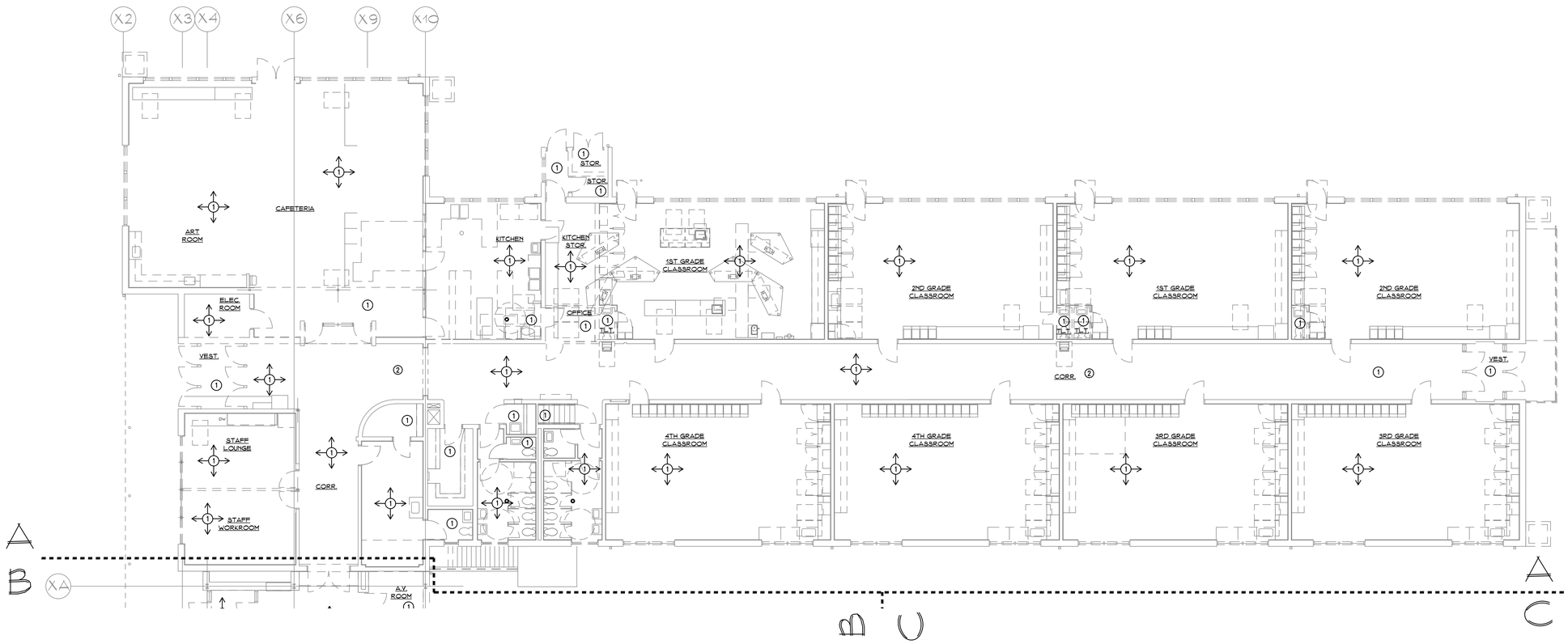


GENERAL DEMOLITION NOTES

1. ELECTRICAL DEMOLITION TO BE SUPERVISED BY LICENSED ELECTRICAL CONTRACTOR. EACH CIRCUIT TO BE VERIFIED "COLD" AND DISCONNECTED FROM ELECTRICAL SERVICE PRIOR TO COMMENCING REMOVAL.
2. REMOVE EXISTING ELECTRICAL EQUIPMENT & MATERIALS AS REQUIRED TO ACCOMMODATE ARCHITECTURAL WORK AND AS SPECIFICALLY NOTED ON THE DEMOLITION DRAWINGS.
3. ALL MATERIALS BEING REMOVED SHALL BE HANDLED IN A MANNER COMPLYING WITH ALL PERTINENT LAWS, CODES AND ENVIRONMENTAL REGULATIONS.
4. WHERE ELECTRICAL EQUIPMENT & DEVICES ARE BEING REMOVED, COORDINATE AND FIELD VERIFY IF BRANCH CIRCUIT FEEDS THROUGH TO EQUIPMENT/DEVICES TO REMAIN. BRANCH CIRCUITS SHALL BE SPLICED OR RELOCATED TO MAINTAIN CONTINUATION OF SERVICES.
5. WHERE EXISTING DEVICES ARE REMOVED & NO NEW DEVICES ARE INSTALLED IN THE SAME LOCATION, REMOVE ALL WIRING FROM BOX & PROVIDE PROPERLY SIZED BLANK COVER PLATE.
6. CONTRACTOR SHALL REMOVE ALL FLUORESCENT LIGHT FIXTURE BALLASTS & IDENTIFY THOSE CONTAINING PCB'S, ON ALL REMOVED LIGHTING FIXTURES.
7. REFER TO ABATEMENT SCOPE FOR HANDLING OF MATERIALS. ALL REMOVED COMPONENTS SHALL BE LEGALLY DISPOSED OF BY CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
8. ELECTRICAL DEMOLITION SCOPE SHALL BE 100% COMPLETE INCLUDING ALL EQUIPMENT, WIRE, CABLE, DEVICES, AND EXPOSED CONDUIT & BOXES, UNLESS THE ELECTRICAL PANELS OR DEVICES INDICATED IN THIS ELECTRICAL DEMOLITION PLAN TO REMAIN. CONDUIT & BOXES RECESSED IN EXISTING WALLS THAT REMAIN CAN NOT BE ABANDONED IN PLACE. REMOVE ALL ASSOCIATED WIRE & CABLES. COORDINATE WITH OWNER, ELECTRICAL ENGINEER OR ARCHITECTS.
9. COORDINATE ALSO WITH MECHANICAL AND PLUMBING DEMO PLANS FOR EQUIPMENT BEING REMOVED. DISCONNECT POWER AND REMOVE CONDUIT AND WIRING BACK TO PANEL.
10. THE SITE SHALL BE BROOM-CLEANED AT THE END OF EACH WORKDAY.

PLAN PWR DEMO NOTES

(1) REMOVE AND DISPOSE ALL EXISTING ELECTRICAL LIGHTING FIXTURES, LIGHTING AND POWER DEVICES, (AS SWITCHES, POWER OUTLETS, DATA OUTLETS, ELECTRICAL CLOCK ETC.) AND FIRE ALARM DEVICES (SMOKE DETECTORS, HORN/STROBES) AND ASSOCIATED BRANCH CIRCUITS, WIRING OR CONDUITS, IN THIS SPACE UNLESS SPECIFICALLY NOTED OTHERWISE. COORDINATE IN FIELD ALL MECHANICAL AND PLUMBING FIXTURES TO BE REMOVED WITH DIV. 22 AND 23.

(2) REMOVE AND DISPOSE EXISTING ELECTRICAL PANELS AND ASSOCIATED WIRES AND CONDUITS IN THE AREA. EC SHALL BE RESPONSIBLE FOR PHASING OF THE PROJECT WHEN REMOVING AND DISPOSE ALL ELECTRICAL PANEL AND OTHER ELECTRICAL DEVICES, AS WELL AS TEMPORARY FEEDER IF NECESSARY.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND.

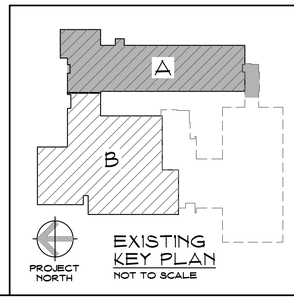
COORDINATE DEMOLITION WITH ARCHITECTURAL DRAWINGS, PLUMBING, MECHANICAL, ELECTRICAL POWER AND ONE-LINE DIAGRAM E301.

ELECTRICAL POWER COMPONENTS SHOWN ON THE DEMOLITION DRAWINGS AND SCHEDULES, AND THE ASSOCIATED CONDUIT, WIRE AND BOXES, ARE TO BE REMOVED AND DISPOSED OF UNLESS SPECIFICALLY NOTED OTHERWISE. ALL SMART BOARDS AND PROJECTORS MUST BE RETURN TO THE OWNER.

NORTH

1ST FLOOR ELECTRICAL DEMO PLAN, AREA "A" (1 / ED001)

SCALE: 1/8" = 1'-0"



Project Title:
Expansion and Renovate as New Project - PHASE 1 of 3
Crystal Lake Elementary School
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Ellington, Connecticut 06029

SILVER / PETRUCELLI + ASSOCIATES
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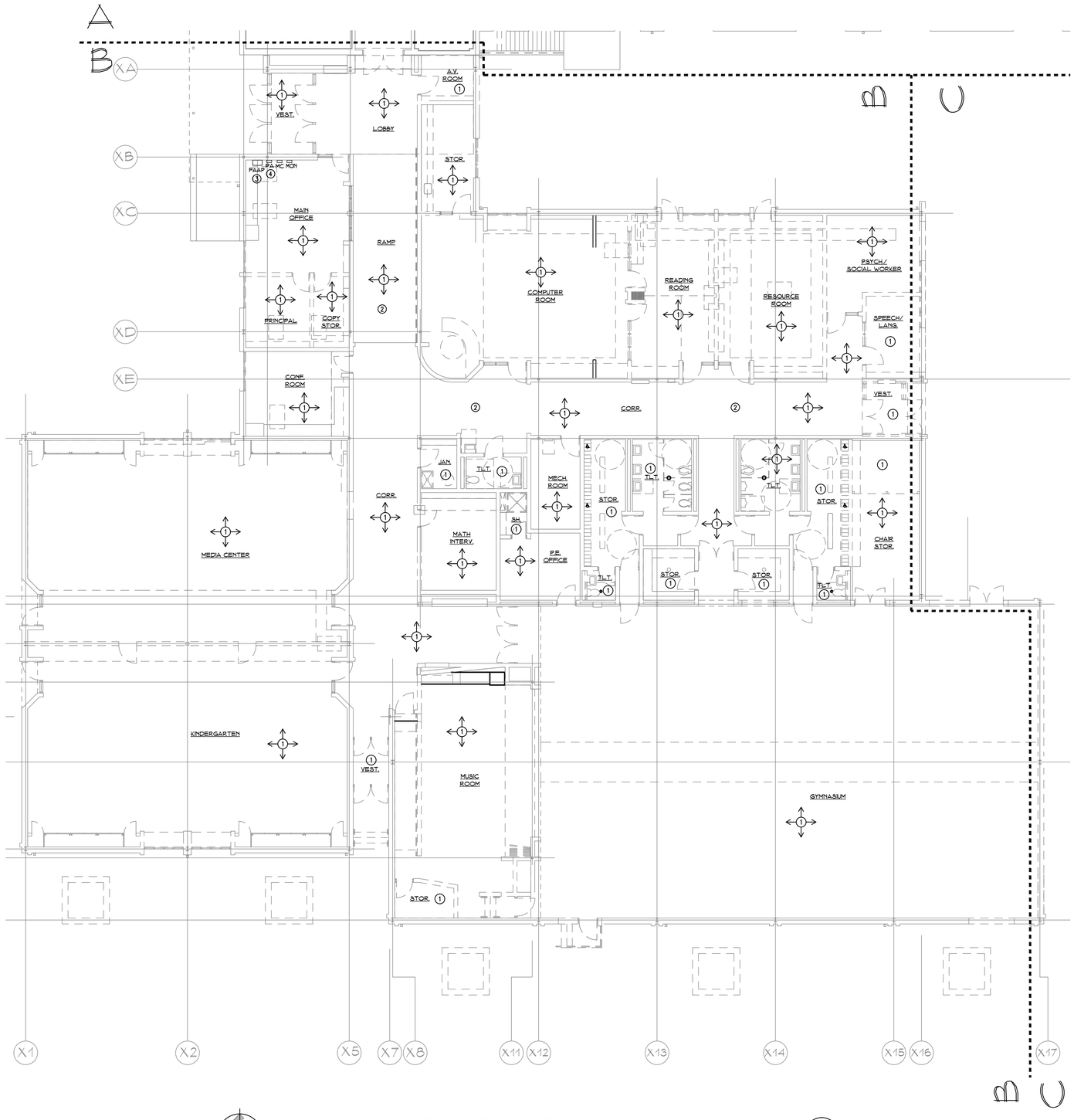
Revision:	Description:	Date:	Revised By:
--	ISSUED FOR BIDDING	NOV. 26, 2013	--

Drawing Title:
1st FLOOR ELECTRICAL DEMO PLAN, AREA "A"
State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: ED001



PLAN PWR DEMO NOTES

1. REMOVE AND DISPOSE ALL EXISTING ELECTRICAL LIGHTING FIXTURES, LIGHTING AND POWER DEVICES, (AS SWITCHES, POWER OUTLETS, DATA OUTLETS, ELECTRICAL CLOCK ETC.) AND FIRE ALARM DEVICES (SMOKE DETECTORS, HORN/STROBES) AND ASSOCIATED BRANCH CIRCUITS, WIRING OR CONDUITS, IN THIS SPACE UNLESS SPECIFICALLY NOTED OTHERWISE. COORDINATE IN FIELD ALL MECHANICAL AND PLUMBING FIXTURES TO BE REMOVED WITH DIV. 22 AND 23.
2. REMOVE AND DISPOSE EXISTING ELECTRICAL PANELS AND ASSOCIATED WIRES AND CONDUITS IN THE AREA. EC SHALL BE RESPONSIBLE FOR PHASING OF THE PROJECT WHEN REMOVING AND DISPOSE ALL ELECTRICAL PANEL AND OTHER ELECTRICAL DEVICES, AS WELL AS TEMPORARY FEEDER IF NECESSARY.
3. FIRE ALARM ANNUCIATOR PANEL, FAAP, SHALL REMAIN IN PHASE I.
4. NEW PA SYSTEM SHALL REMAIN IN PHASE I.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND.
COORDINATE DEMOLITION WITH ARCHITECTURAL, PLUMBING, MECHANICAL, ELECTRICAL POWER DRAWINGS AND ONE-LINE DIAGRAM E301.

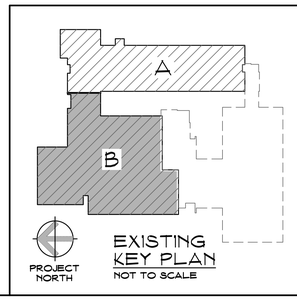
ELECTRICAL POWER COMPONENTS SHOWN ON THE DEMOLITION DRAWINGS AND SCHEDULES, AND THE ASSOCIATED CONDUIT, WIRE AND BOXES, ARE TO BE REMOVED AND DISPOSED OF UNLESS SPECIFICALLY NOTED OTHERWISE. ALL SMART BOARDS AND PROJECTORS MUST BE RETURN TO THE OWNER.

NORTH

1ST FLOOR ELECTRICAL DEMO PLAN, AREA "B"

SCALE: 1/8" = 1'-0"

1 / ED002



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1st FLOOR ELECTRICAL DEMO PLAN, AREA "B"
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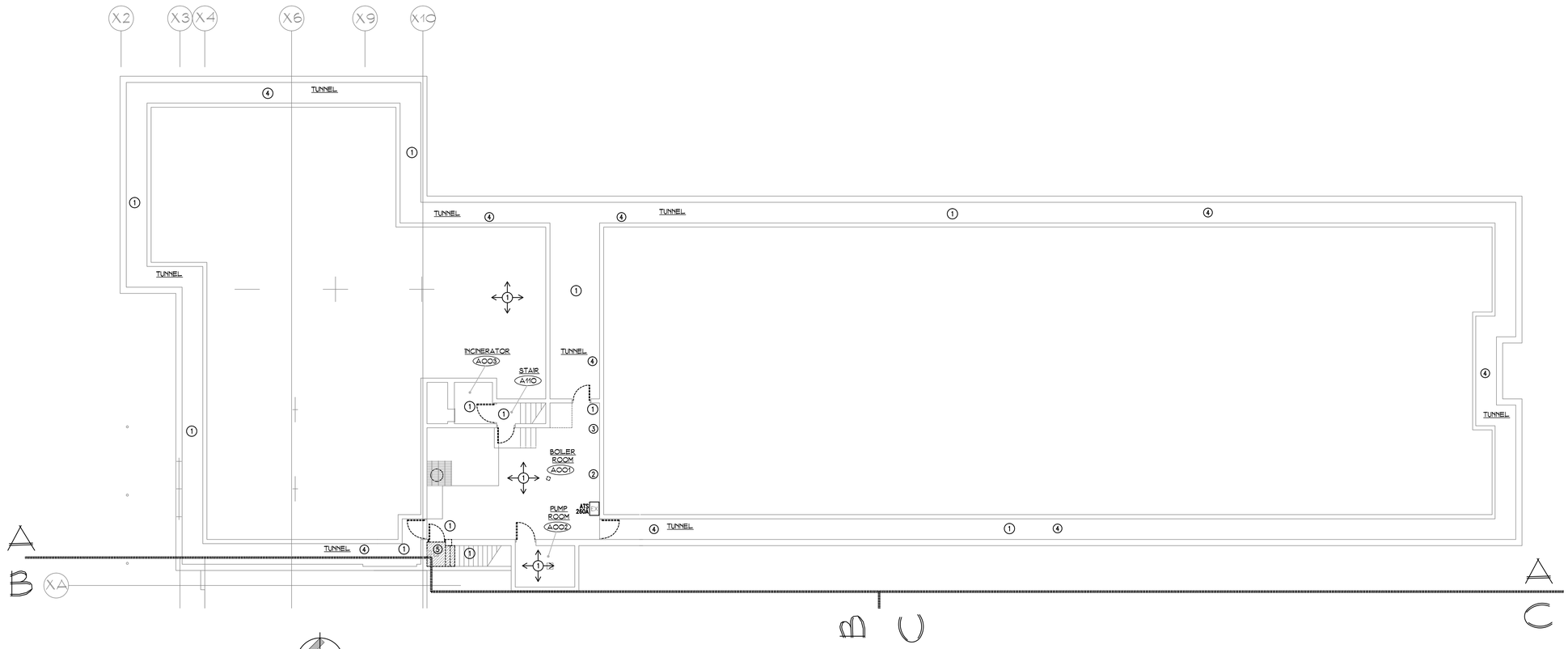
Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: ED002



BASEMENT ELECTRICAL DEMO PLAN

1 ED003

SCALE: 1/8" = 1'-0"

ELECTRICAL POWER COMPONENTS SHOWN ON THE DEMOLITION DRAWINGS AND SCHEDULES, AND THE ASSOCIATED CONDUIT, WIRE AND BOXES, ARE TO BE REMOVED AND DISPOSED OF UNLESS SPECIFICALLY NOTED OTHERWISE.
ALL SMART BOARDS AND PROJECTORS MUST BE RETURN TO THE OWNER.

PLAN PWR DEMO NOTES

1. REMOVE AND DISPOSE ALL EXISTING ELECTRICAL LIGHTING FIXTURES, LIGHTING AND POWER DEVICES, (AS SWITCHES, POWER OUTLETS, DATA OUTLETS, ELECTRICAL CLOCK ETC.) AND FIRE ALARM DEVICES (SMOKE DETECTORS, HORN/STROBES) AND ASSOCIATED BRANCH CIRCUITS, WIRING OR CONDUITS, IN THIS SPACE UNLESS SPECIFICALLY NOTED OTHERWISE. COORDINATE IN FIELD ALL MECHANICAL AND PLUMBING FIXTURES TO BE REMOVED WITH DIV. 22 AND 23. EXISTING 260AMPS ATS TO REMAIN AND RECONNECT TO EM PANEL ON PHASE I. COORDINATE WITH POWER DRAWINGS AND PHASES, PRIOR ANY PNL REMOVING.
2. REMOVE AND DISPOSE EXISTING ELECTRICAL PANELS. EC SHALL BE RESPONSIBLE FOR PHASING OF THE PROJECT WHEN REMOVING AND DISPOSE ALL ELECTRICAL PANEL AND OTHER ELECTRICAL DEVICES, AS WELL AS TEMPORARY FEEDER IF NECESSARY.
3. EXISTING TELEPHONE D-MARK TO REMAIN.
4. EXISTING CONDUIT FOR LIGHTING TO REMAIN. REUSE THE CONDUIT AND WIRES, REFER TO BASEMENT LIGHTING PLAN E103. FOR NEW FIXTURE TYPE AND NEW 3-WAY SWITCHES.
5. EXISTING CONDUIT FOR LIGHTING TO REMAIN. REUSE THE CONDUIT, REPLACE THE FIXTURE.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND. REFER TO POWER DRAWINGS: E200, E201, E202 FOR PHASING AND OTHER DETAILS.

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BASEMENT ELECTRIC. DEMO PLAN
State Project Number: 048-0058 EA/RR/PS

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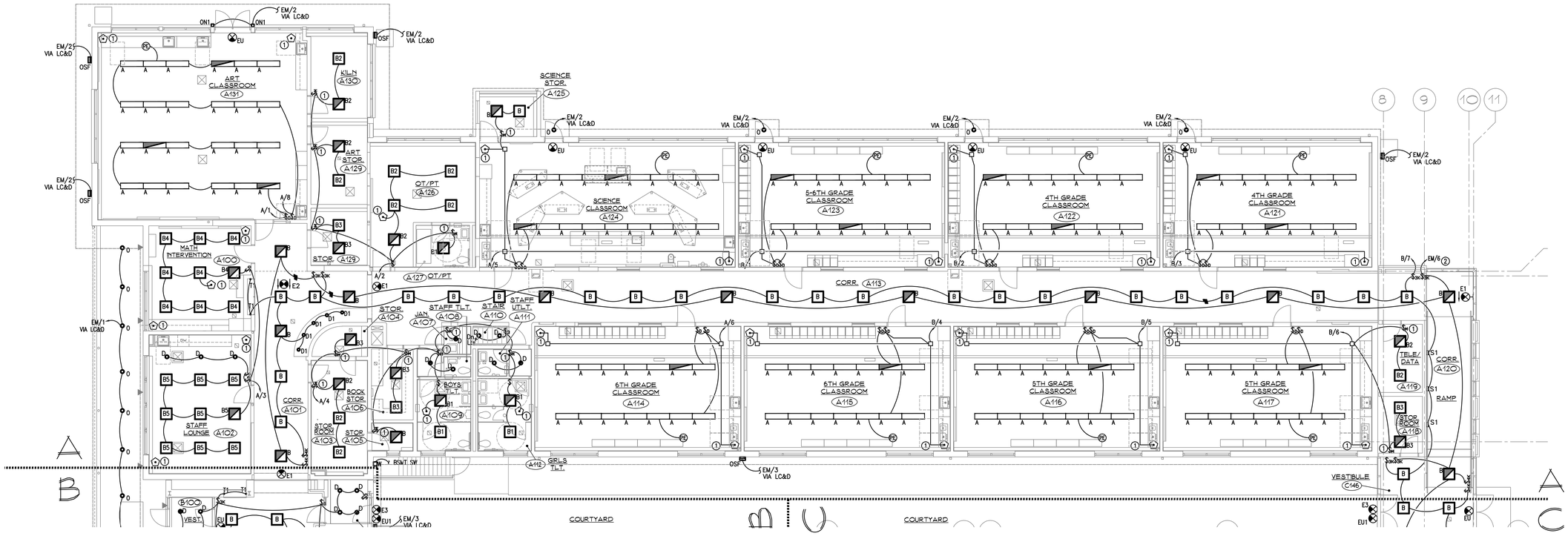
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: ED003



NORTH

1ST FLOOR LIGHTING PLAN, AREA "A"

SCALE: 1/8" = 1'-0"

1 / E100

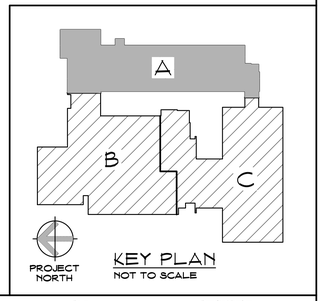
PLAN LIGHTING NOTES

1. PROVIDE MOTION DETECTOR SWITCH TO OPERATE LIGHT FIXTURE(S) WITHIN THE INTENDED ROOM. COORDINATE WITH OWNER FOR LENGTH OF TIME DELAY SETTING. SEE DETAILS ON DRAWING 'E305'.
2. ALL CORRIDOR LIGHTS WITH SHADING SHALL BE CONNECTED TO THE EMERGENCY PANEL VIA A UL924 RELAY.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND AND LIGHTING SCHEDULE NOTES.

ELECTRICAL CONTRACTOR SHALL PROVIDE ON EACH SWITCH AREA AN UL924 EMERGENCY LIGHTING RELAY (WIRED TO AN EMERGENCY CIRCUIT FROM THE EMERGENCY PANEL 'EM' LOCATED IN THE BASEMENT ROOM A001), TO CONTROL SHADED FIXTURES. REFER TO DETAILS ON DRAWING 'E305'.

BID ALTERNATE: ELIMINATE DIMMING SWITCHES. REFER TO DETAIL DRAWING 'E305' FOR DETAIL SCHEMATICS.



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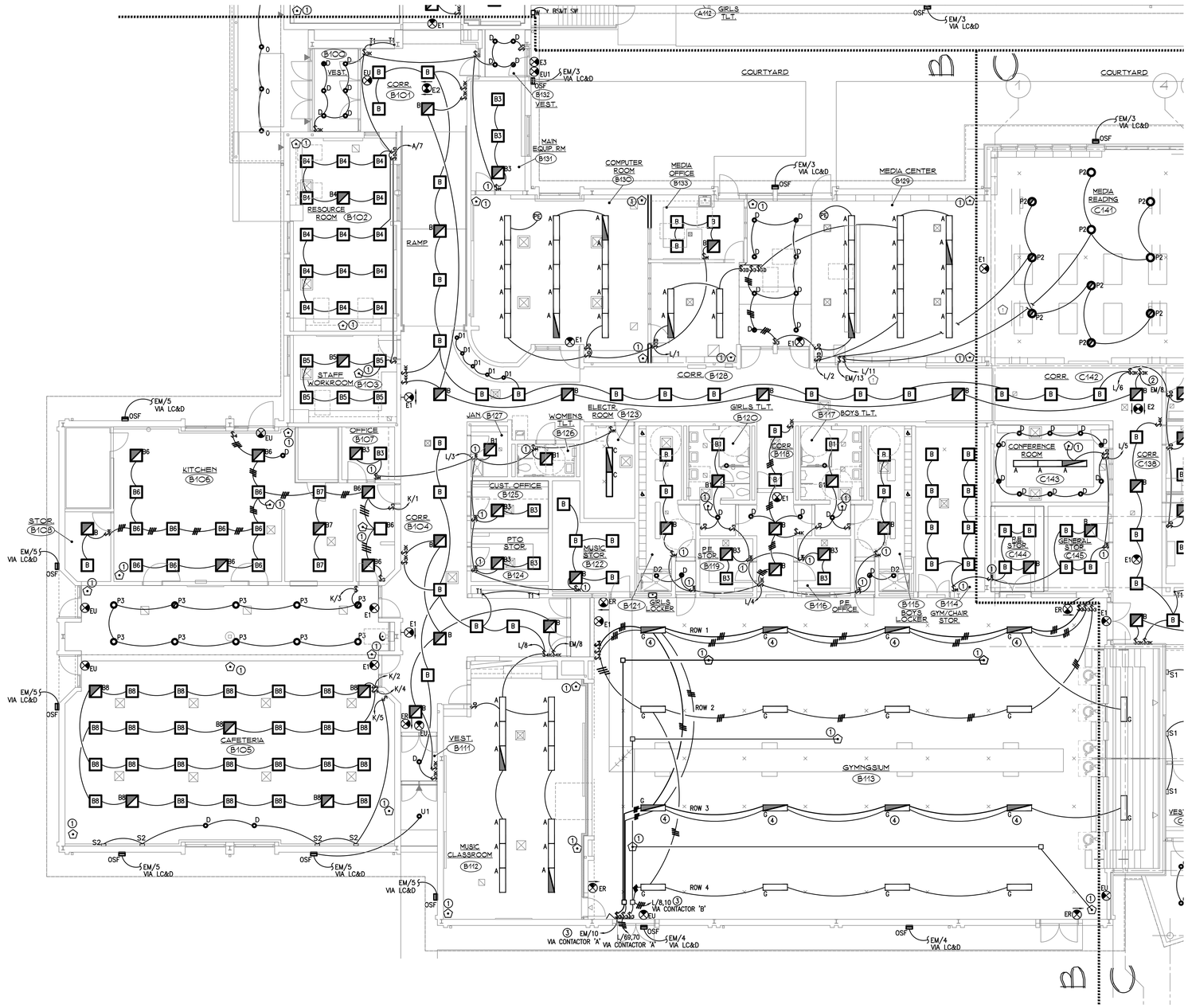
Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E100



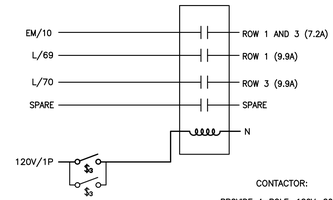
NORTH

1ST FLOOR LIGHTING PLAN, AREA "B"

SCALE: 1/8" = 1'-0"

1 / E101

CONTACTOR 'A'



(LIGHT SWITCHES FOR (3) 2-LAMP BALLAST FIXTURES)

CONTACTOR:

PROVIDE 4-POLE, 120V, 20/30A CONTACTOR IN NEMA-1 ENCLOSURE, SQUARE D, ASCO OR EQUAL.

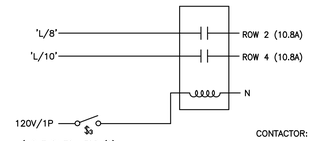
GYM LIGHTING CONTROL SCHEMATIC FOR 3-LAMP ONE BALLAST

NTS

PLAN NOTES:

1. PROVIDE LIGHTING CONTROL 4 POLE CONTACTOR.
2. PROVIDE 'EM' PANEL BRANCH CIRCUIT.
3. PROVIDE LABELS ON CONTACTORS.
4. THE CONTACTOR SHALL BE LOCATED ABOVE CEILING IN THE GYM.

CONTACTOR 'B'



(LIGHT SWITCH FOR (2) 3-LAMP BALLAST FIXTURES)

CONTACTOR:

PROVIDE 2-POLE, 120V, 20/30A CONTACTOR IN NEMA-1 ENCLOSURE, SQUARE D, ASCO #917 OR EQUAL.

GYM LIGHTING CONTROL SCHEMATIC FOR 3-LAMP ONE BALLAST

NTS

PLAN NOTES:

1. PROVIDE LIGHTING CONTROL 2 POLE CONTACTOR.
2. PROVIDE 'L' PANEL BRANCH CIRCUIT.
3. PROVIDE LABELS ON CONTACTORS.
4. THE CONTACTOR SHALL BE LOCATED ABOVE CEILING IN THE GYM.

PLAN LIGHTING NOTES

1. PROVIDE MOTION DETECTOR SWITCH TO OPERATE LIGHT FIXTURE(S) WITHIN THE INTENDED ROOM. COORDINATE WITH OWNER FOR LENGTH OF TIME DELAY SETTING. SEE DETAILS ON DRAWING 'E305'.
2. ALL CORRIDOR LIGHTS WITH SHADING SHALL BE CONNECTED TO THE EMERGENCY PANEL VIA A UL924 RELAY.
3. FOLLOW THE SKETCHES FOR INTERCONNECTIONS WITH THE CONTACTORS ON THIS DRAWING.
4. PROVIDE ALL EM SHADED FIXTURES IN THE GYM AREA WITH 3 (2) LAMPS BALLAST. CONNECT ONE (2) LAMPS BALLAST ON EACH EM FIXTURE TO THE EM CIRCUIT AND REST OF 2 BALLASTS TO NORMAL POWER.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND.

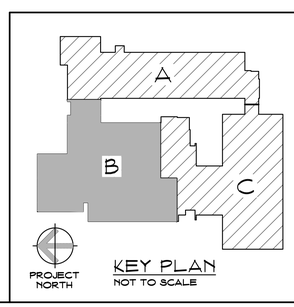
ELECTRICAL CONTRACTOR SHALL PROVIDE ON EACH SWITCH AREA AN UL-924 EMERGENCY LIGHTING RELAY (WIRED TO AN EMERGENCY CIRCUIT FROM THE EMERGENCY PANEL 'EM' LOCATED IN THE BASEMENT ROOM A001), TO CONTROL SHADED FIXTURES. REFER TO DETAILS ON DRAWING 'E305'.

BID ALTERNATE: ELIMINATE DIMMING SWITCHES.REFER TO DETAIL DRAWING 'E305' FOR DETAIL SCHEMATICS.

PHASE 1

ELECTRICAL NOTES:

① PROVIDE IN PHASE I THE TEMPORARY SWITCHES IN MEDIA READING 'C141'.



KEY PLAN
NOT TO SCALE

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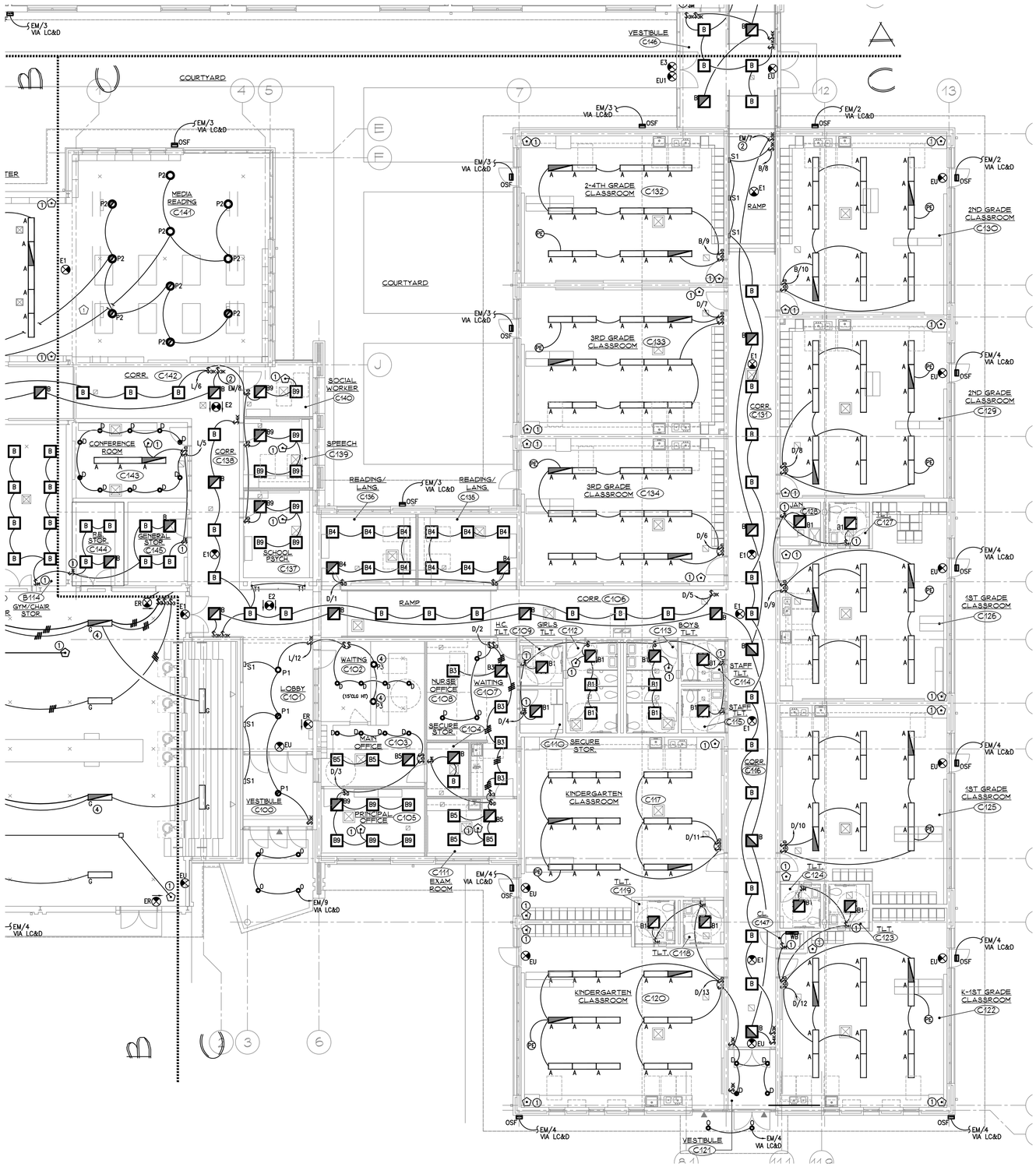
Drawing Title:
1ST FLOOR LIGHTING PLAN, AREA "B"
State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E101



1ST FLOOR LIGHTING PLAN, AREA "C"

SCALE: 1/8" = 1'-0"

1 E102

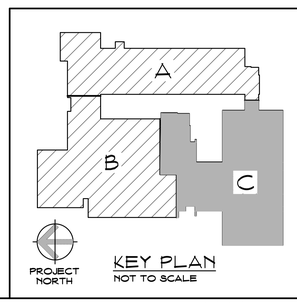
PLAN LIGHTING NOTES

1. PROVIDE MOTION DETECTOR SWITCH TO OPERATE LIGHT FIXTURE(S) WITHIN THE INTENDED ROOM. COORDINATE WITH OWNER FOR LENGTH OF TIME DELAY SETTING. SEE DETAILS ON DRAWING 'E305'.
2. ALL CORRIDOR LIGHTS WITH SHADING SHALL BE CONNECTED TO THE EMERGENCY PANEL VIA A UL924 RELAY.
3. FOLLOW THE SKETCHES FOR INTERCONNECTIONS WITH THE CONTACTORS ON THIS DRAWING.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND.

ELECTRICAL CONTRACTOR SHALL PROVIDE ON EACH SWITCH AREA AN UL-924 EMERGENCY LIGHTING RELAY (WIRED TO AN EMERGENCY CIRCUIT FROM THE EMERGENCY PANEL 'EM' LOCATED IN THE BASEMENT ROOM A001), TO CONTROL SHADED FIXTURES. REFER TO DETAILS ON DRAWING 'E305'.

BID ALTERNATE: ELIMINATE DIMMING SWITCHES.REFER TO DETAIL DRAWING 'E305' FOR DETAIL SCHEMATICS.



KEY PLAN
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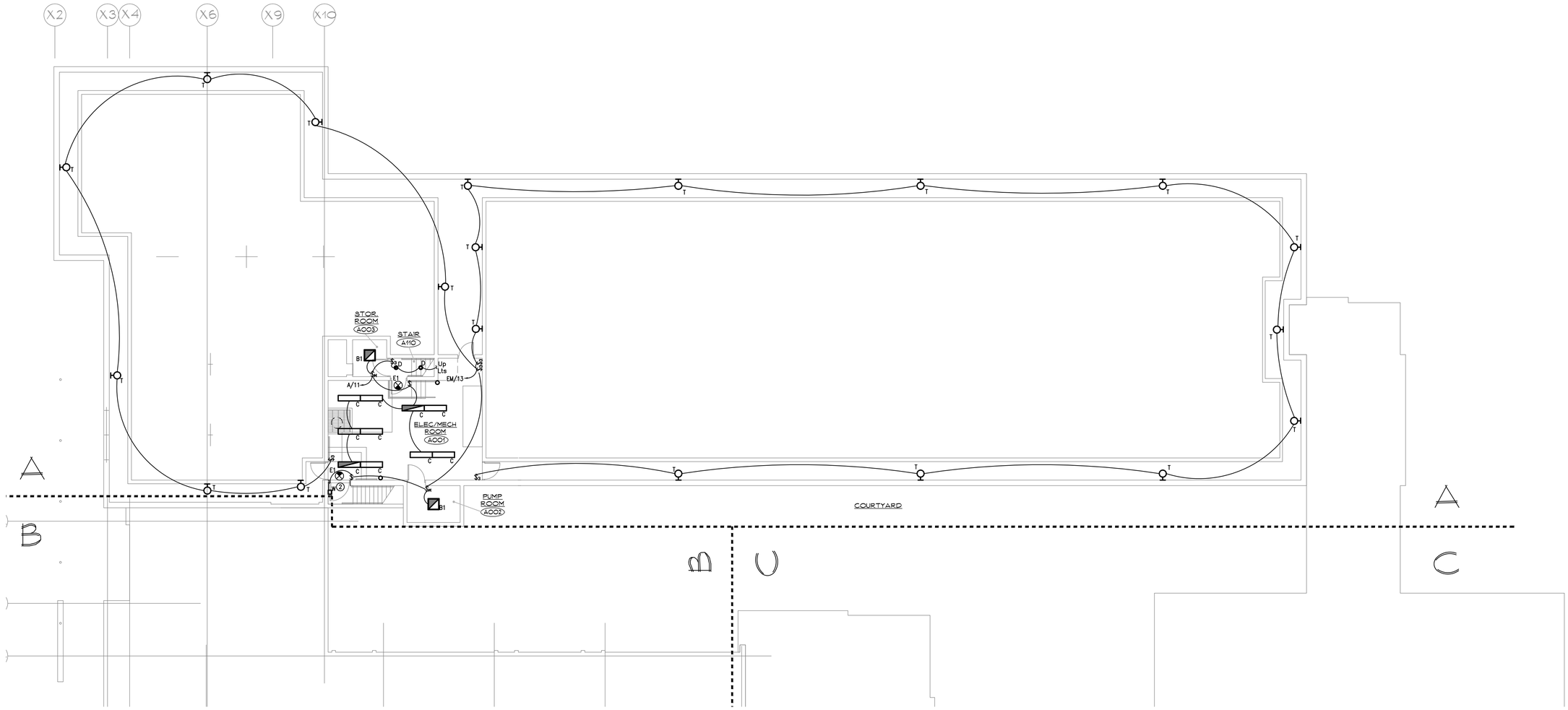
Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E102



BASEMENT & TUNNEL LIGHTING PLAN

1 / E103

SCALE: 1/8" = 1'-0"

NORTH

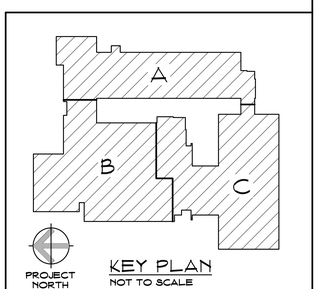
PLAN LIGHTING NOTES

1. PROVIDE MOTION DETECTOR SWITCH TO OPERATE LIGHT FIXTURE(S) WITHIN THE INTENDED ROOM. COORDINATE WITH OWNER FOR LENGTH OF TIME DELAY SETTING. SEE DETAILS ON DRAWING 'E305'.
2. CORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND.

ELECTRICAL CONTRACTOR SHALL PROVIDE ON EACH SWITCH AREA AN UL-924 EMERGENCY LIGHTING RELAY (WIRED TO AN EMERGENCY CIRCUIT FROM THE EMERGENCY PANEL 'EM' LOCATED IN THIS ROOM), TO CONTROL SHADED FIXTURES. REFER TO DETAILS ON DRAWING 'E305'.

THE HOMERUNS MARKED 120V/20A MUST BE CONNECTED TO ONE OF THE SPARE CIRCUIT TO THE CLOSEST NEW ELECTRICAL PANEL.



KEY PLAN
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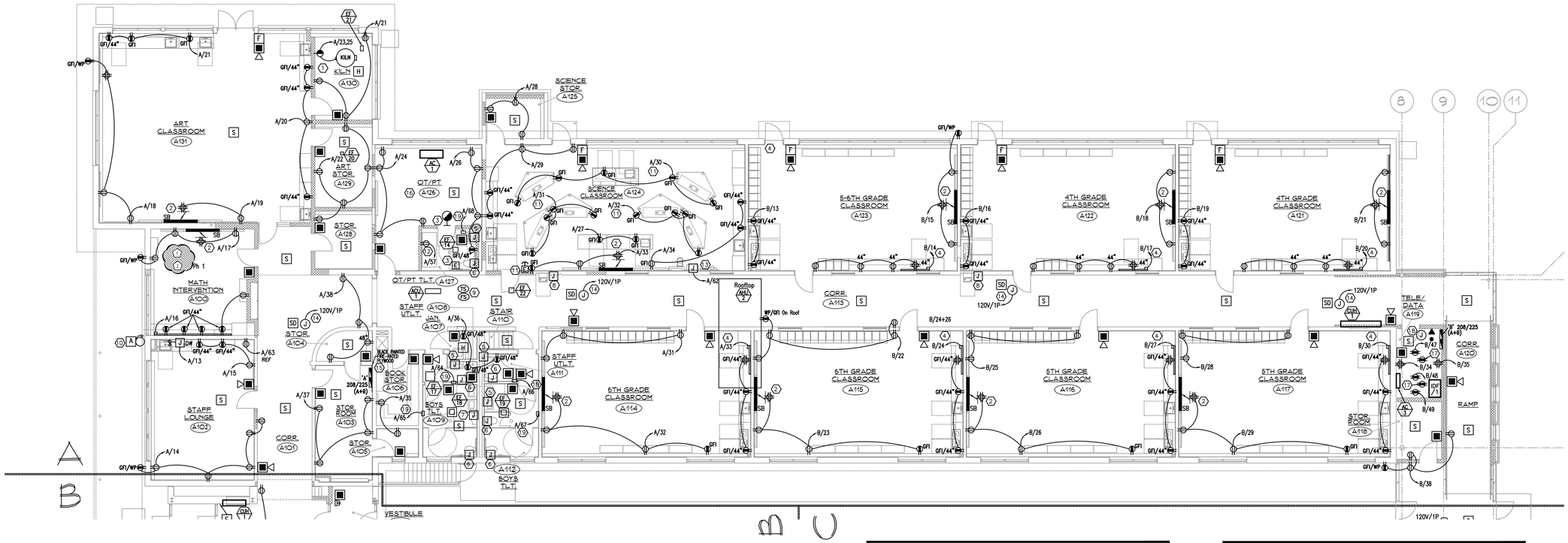
Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E103



NORTH

1ST FLOOR POWER PLAN, AREA "A"

SCALE: 1/8" = 1'-0"

1 / E200

PHASE 1

ELECTRICAL NOTES: PART A

1. PROVIDE IN PHASE I THE TEMPORARY FEEDER FROM EXISTING MDP, ELECTRICAL ROOM, TO NEW AREA 'C' PANEL 'D', ROOM C128. ELECTRICAL CONTRACTOR SHALL PROVIDE FEEDER PER ORIGINAL DESIGN DRAWINGS, ON PHASE II, FROM NEW PANEL 'SDP' TO PANEL 'D'. FEEDER SIZE: 225AMPS, 4 #4/0 & 1 #4 GND.
2. FIRE ALARM PANEL (SIMPLEX), EXISTING AND LOCATED IN ELECTRICAL ROOM SHALL REMAIN TEMPORARILY. NEW FACP SHALL BE INSTALLED AT THE START OF CONSTRUCTION SO THAT EACH AREA CAN BE SWAPPED OVER. PROVIDE A TEMPORARY CONNECTION BETWEEN THE PANELS SO THAT EITHER WILL ACTIVATE THE OTHER. RESET OF BOTH PANELS WILL BE REQUIRED ON ANY ALARM.

POWER PLAN NOTES

1. PROVIDE NEW RECEPTACLE NEMA '6-50R', 2POLE, 3WIRE, GROUNDING OR EQUAL FOR SKUTT AUTOMATIC KILN, KM-1227 PK. PROVIDE 120V/1P FOR VENT FROM RECEPTACLE CIRCUIT IN THE AREA. COORDINATE DETAILS IN FIELD WITH DIVISION 23.
2. MOUNT ALL DEVICES ABOVE CENTER OF THE SMART BOARD. COORDINATE EXACT LOCATION IN FIELD WITH A/V CONTRACTOR. SEE ALSO NOTE #4.
3. PROVIDE NEW HANDICAP CALL-FOR-AID SYSTEM. WIRE TO ROOM RECEPTACLE BRANCH CIRCUIT.

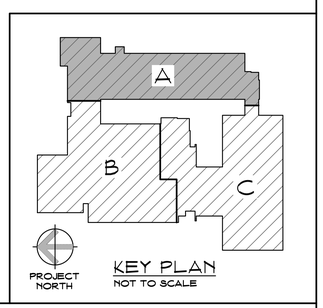
   USE: 'AUTHENTIC PARTS' #302-2C/#206-2 OR EQUAL
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL DUAL-CHANNEL SURFACE RACEWAY (WIREMOLD 6000 SERIES STEEL OR EQUAL) (AT 44" AFF TO SERVE COMPUTER DESKS). PROVIDE ALL REQUIRED END FITTINGS, ELBOWS, FACEPLATES, BRACKETS & HARDWARE TO SERVE DEVICES SHOWN. ALL OTHER RECEPTACLES SHALL BE ON WIREMOLD 500 SERIES STEEL SURFACE RACEWAY. PROVIDE COLOR TO MATCH ARCHITECTURAL WALL BASE. REFER TO A720, DETAIL 3 & 2.
5. PROVIDE 120V/20A TO THE JUNCTION BOX. CONNECT BOX-MOUNT TRANSFORMER 'EL-208', 120VAC/24VAC, 100 VA, 50/60 HZ CLASS II, UL LISTED, TO SUPPLY VOLTAGE TO CONTROL MODULE FOR SENSOR OPERATED ELECTRONIC HAND WASHING FAUCET. A SINGLE TRANSFORMER OPERATE UP TO 6 FAUCETS. JUNCTION BOX SHOULD BE MOUNTED INSIDE CHASE WALL OR ABOVE CEILING. INSTALL TRANSFORMER WITHIN UNDER-LAVATORY ENCLOSURE. 18 GAUGE WIRE IS RECOMMENDED BY MANUFACTURER. COORDINATE WITH DIV. 22. CONNECT TO LOCAL RECEPTACLE CIRCUIT.
6. PROVIDE 120/20A JUNCTION BOX, WIRE AND CONDUIT TO INSTALL 'EL-154' TRANSFORMER FOR EACH FLUSH VALVE. A SINGLE TRANSFORMER OPERATE UP TO 10 FLUSH VALVES. COORDINATE WITH DIV. 22.
7. PROVIDE 120V TO THE JUNCTION BOX. CONNECT BOX MOUNT TRANSFORMER 120VAC/24VAC (50VA) TO SUPPLY VOLTAGE TO URINAL FLUSHOMETER WALL BOX CONTROL. A SINGLE TRANSFORMER OPERATE UP TO 10 FLUSHOMETERS. JUNCTION BOX SHOULD BE MOUNTED INSIDE CHASE WALL OR ABOVE CEILING. INSTALL TRANSFORMER WITHIN 50 FEET OF URINAL. 18 GAUGE WIRE IS RECOMMENDED BY MANUFACTURER.
8. PROVIDE 120V/1P/20A JUNCTION BOX FOR WALL-MOUNTED WATER COOLER. CONNECT TO THE RECEPTACLE CIRCUIT IN THE AREA. COORDINATE WITH DIV. 22.
9. PROVIDE FIRE ALARM MODULES FOR EACH FIRE PROTECTION TAMPER AND FLOW SWITCH. COORDINATE QTY AND LOCATION WITH FIRE PROTECTION CONTRACTOR DIV. 21 AND FIRE MARSHAL. WIRE TO FIRE ALARM SYSTEM.
10. PROVIDE FEEDER FOR ELECTRICAL ALARM BELL FROM SPRINKLER VALVE LOCATED IN ELECTRICAL/MECHANICAL ROOM A001.
11. PROVIDE EMERGENCY POWER OFF SWITCHES WIRES AND 1" CONDUIT FOR ALL (3) THREE THE GFCI TABLE RECEPTACLES CIRCUITS. THE CONDUITS MUST BE FROM THE BASEMENT TRENCH IN CONCRETE ENCASED. PROVIDE 3-POLE, 120V, 20/30A CONTACTOR IN NEMA-1 ENCLOSURE. COORDINATE CONDUIT ROUTING IN FIELD WITH DIV. 22 AND OWNER FOR THE EXACT LOCATION.
12. PROVIDE DEDICATED CIRCUIT 120V/20A FOR MOTORIZED SPECIAL NEEDS CHANGING TABLE. RECEPTACLE SHALL BE RECESSED IN THE WALL BEHIND THE PANEL AT 7.5" TO THE RIGHT OFF CENTER OF PANEL AND 3.5" AFF MINIMUM TO THE BOTTOM OF THE BOX AND 5 1/8 " TO THE TOP.
13. PROVIDE 120V/1P/20AMPS, JUNCTION BOX, CONDUIT AND POWER WIRING FOR 'ESH1H' FLOW SWITCH ALARM SYSTEM AND POWER GOGGLE SANITIZER ALSO. COORDINATE EXACT LOCATIONS IN FIELD WITH DIV. 22.
14. PROVIDE CONTROL CIRCUIT TO J-BOX ABOVE CEILING FOR ZONE DAMPERS IN THIS AREA. PROVIDE ADDRESSABLE FLASHSCAN INTELLIGENT RELAY FOR EACH CLOSED GROUP, MAXIMUM OF 6. COORDINATE LOCATION AND 120 OR 24 VOLT REQUIREMENT WITH HVAC CONTRACTOR DIV. 23.
15. PROVIDE BLACK PAINTED FIRE-RATED PLYWOOD BACKBOARD FOR WALL MOUNTED EQUIPMENT (TYP).
16. COORDINATE ALL WALL MOUNTED DEVICES INSTALLATIONS IN THIS ROOM WITH WALL PADS.
17. PROVIDE TWIST-LOCK RECEPTACLES 208V/2P/30AMPS, WIRE TO PANEL 'B' SECTION B (43, 45 AND 44, 46). REFER TO DRAWING 'E302 FA RISER DIAGRAM'.

POWER PLAN NOTES CONT.

18. PROVIDE CIRCUIT 120V/1P, WIRES AND CONDUITS FOR POWER TO DOOR STRIKES WHERE SHOWN. PROVIDE J-BOX ABOVE ACCESSIBLE CEILING UNLESS OTHERWISE COORDINATED IN FIELD. CONNECT TO LOCAL RECEPTACLE CIRCUIT.
19. PROVIDE 120V/20A JUNCTION BOX, WIRE AND CONDUIT FOR WALL MOUNTED NEW COMMERCIAL HAIR DRYER EXCEL #XLERATOR OR EQUAL.

NOTE:
- COORDINATE THE TEACHER DESK QUAD RECEPTACLES WITH IT AND FURNITURE PLANS.

ELECTRICAL CONTRACTOR SHALL MOUNT ALL WALL RECEPTACLES AT 26'AFF TO THE CENTER OF THE BOX. COORDINATE IN FIELD WITH BASEBOARDS RADIATION.



KEY PLAN
NOT TO SCALE

Project Title:
Expansion and Renovate as New Project - PHASE 1 of 3
Crystal Lake Elementary School
284 Sandy Beach Road
Ellington, Connecticut 06029

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06518-2340
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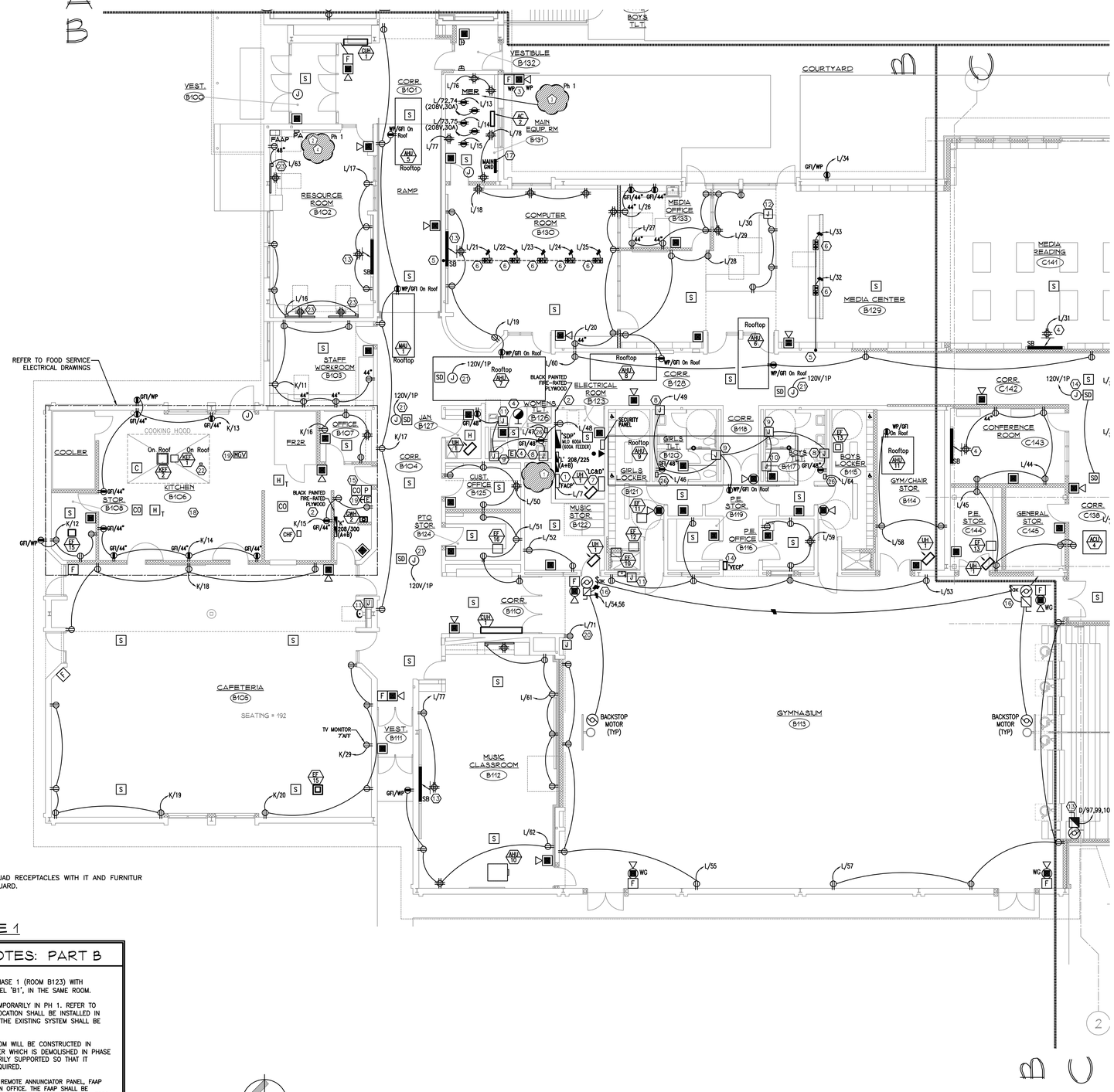
Revision:	Description:	Date:	Revised By:
--	ISSUED FOR BIDDING	NOV. 26, 2013	--

Drawing Title:
1ST FLOOR POWER PLAN, AREA "A"
State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E200



NOTES:
- COORDINATE THE TEACHER DESK QUAD RECEPTACLES WITH IT AND FURNITUR
- 'WG' = EC SHALL PROVIDE WIRE GUARD.

NORTH

1ST FLOOR POWER PLAN, AREA "B"

SCALE: 1/8" = 1'-0"

1 / E201

POWER PLAN NOTES

1. FIRE ALARM CONTROL PANEL. EXACT LOCATION TO BE COORDINATED IN THE FIELD WITH OWNER.
2. PROVIDE BLACK PAINTED FIRE-RATED PLYWOOD BACKBOARD FOR WALL MOUNTED EQUIPMENT (TYP).
3. PROVIDE HORN/STROBE AND MANUAL PULL STATION TYPICAL WATER PROOF WITH UNIVERSAL PLATE, NEMA 3R, OUTDOOR RATING PER UL-50. EXACT LOCATION TO BE DETERMINED IN FIELD.
4. PROVIDE NEW HANDICAP CALL-FOR-AID SYSTEM. WIRE TO ROOM RECEPTACLE BRANCH CIRCUIT.

   USE: 'AUTHENTIC PARTS' #302-2C/#206-2 OR EQUAL
5. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL 3/4" EMPTY CONDUIT WITH DRAGLINE IN CONCRETE SLAB FOR POWER AND ONE 1 1/4" FOR DATA, STUB UP IN DRYWALL/COLUMN AND EXTEND TO ABOVE NEAREST ACCESSIBLE CEILING. PROVIDE ANTI-SHORT BUSHING ON CONDUIT TERMINATION ABOVE THE CEILING. COORDINATE EXACT LOCATIONS WITH FURNITURE.
6. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL WIREMOLD OMNIBOX SERIES CAST IRON '880CS2-1' SERIES FLOOR BOXES TO MEET NEC REQUIREMENTS ARTICLE 314.27(C) AND UL514A. ALL THE DIMENSIONS FOR BOX LOCATIONS ARE BASED ON THE FURNITURE LAY-OUT.
7. PROVIDE NEW LC&D 'BLUE BOX' PANEL MODEL: "GR1408-DTC MODEM" AND ASSOCIATED 6 BUTTON "CHELSEA DIGITAL SWITCH" AND OUTDOOR DIGITAL PHOTOSENSOR "PCO" (INSTALL ON ROOF).
8. PROVIDE 120V/20A TO THE JUNCTION BOX. CONNECT BOX-MOUNT TRANSFORMER 'EL-208', 120VAC/24VAC, 100 VA, 50/60 HZ CLASS II, UL LISTED, TO SUPPLY VOLTAGE TO CONTROL MODULE FOR SENSOR OPERATED ELECTRONIC HAND WASHING FAUCET. A SINGLE TRANSFORMER OPERATE UP TO 6 FAUCETS. JUNCTION BOX SHOULD BE MOUNTED INSIDE CHASE WALL OR ABOVE CEILING. INSTALL TRANSFORMER WITHIN UNDER-LAVATORY ENCLOSURE. 18 GAUGE WIRE IS RECOMMENDED BY MANUFACTURER. COORDINATE WITH DIV. 22. CONNECT TO LOCAL RECEPTACLE CIRCUIT.
9. PROVIDE 120V/1P/20A JUNCTION BOX, WIRE AND CONDUIT TO INSTALL 'EL-154' TRANSFORMER FOR EACH FLUSH VALVE. A SINGLE TRANSFORMER OPERATE UP TO 10 FLUSH VALVES. COORDINATE WITH DIV. 22.
10. PROVIDE 120V TO THE JUNCTION BOX. CONNECT BOX MOUNT TRANSFORMER 120VAC/24VAC (50VA) TO SUPPLY VOLTAGE TO URINAL FLUSHOMETER WALL BOX CONTROL. A SINGLE TRANSFORMER OPERATE UP TO 10 FLUSHOMETERS. JUNCTION BOX SHOULD BE MOUNTED INSIDE CHASE WALL OR ABOVE CEILING. INSTALL TRANSFORMER WITHIN 50 FEET OF URINAL. 18 GAUGE WIRE IS RECOMMENDED BY MANUFACTURER.
11. PROVIDE 120/20A JUNCTION BOX FOR WALL-MOUNTED WATER COOLER. CONNECT TO THE RECEPTACLE CIRCUIT IN THE AREA. COORDINATE WITH DIV. 22.
12. PROVIDE 120/20A JUNCTION BOX FOR THE RECEPTACLE SURFACE RACEWAY.
13. MOUNT ALL DEVICES ABOVE CENTER OF THE SMART BOARD. COORDINATE EXACT LOCATION IN FIELD WITH A/V CONTRACTOR.
14. NEW EMERGENCY VOICE EVACUATION CONTROL PANEL 'VECP' WITH INTEGRAL MICROPHONE. REFER TO DRAWING 'E302' FOR DETAILS.
15. PROVIDE MANUAL PULL FOR EXTINGUISHING SYSTEM, BY THE DOOR. [P]
16. FURNISH AND INSTALL MOTORS AND DISCONNECT SWITCHES FOR MOTORIZED BASKETBALL HOOPS. PROVIDE DEDICATED BRANCH CIRCUITS, WIRES AND CONDUITS. PROVIDE RETRACTABLE HOOP MOTOR KEY SWITCH, VERIFY WITH MANUFACTURER. PROVIDE 3-WAY CIRCUIT FOR ACTIVATING FROM BOTH DOOR ENTRANCES.
17. GROUNDING AND BONDING AMONG TECHNOLOGY ROOMS B131 AND A119 MUST BE COORDINATED WITH ALL CODE REQUIREMENTS OF TECHNOLOGY. REFER TO DRAWING 'T400' FOR WIRES AND CONDUITS. COORDINATE IN FIELD WITH TECHNOLOGY CONTRACTOR MANAGER.
18. COORDINATE IN FIELD ALL APPLIANCES IN KITCHEN AREA WITH OWNER AND APPLIANCES CUT-SHEETS, PRIOR TO ROUGH-IN THIS AREA. ONLY GENERAL PURPOSE RECEPTACLES AND CIRCUITS ARE SHOWN.
19. PROVIDE EMERGENCY POWER OFF SWITCHES AND WIRES TO MAIN GAS VALVE. COORDINATE IN FIELD WITH DIV. 22 THE SEQUENCE OF OPERATION AND EXACT LOCATION.
20. PROVIDE 120V, 20A CIRCUIT L/71, NON-FUSED DISCONNECT SWITCH AND ALL REQUIRED CONNECTIONS FOR SCOREBOARD ON WALL MOUNTED. WIRELESS CONTROLLER IS FURNISHED WITH UNIT. COORDINATE WITH SCOREBOARD SUPPLIER FOR DETAILS AND VERIFY IN FIELD MOUNTING HEIGHTS FOR RECEPTACLE OUTLET BOX. PROVIDE WIRE GUARD
21. PROVIDE CONTROL CIRCUIT TO J-BOX ABOVE CEILING FOR ZONE DAMPERS IN THIS AREA. PROVIDE ADDRESSABLE FLASHSCAN INTELLIGENT RELAY FOR EACH CLOSED GROUP, MAXIMUM OF 6. COORDINATE LOCATION AND 120 OR 24 VOLT REQUIREMENT WITH HVAC CONTRACTOR DIV. 23.
22. PROVIDE 4 POLE CONTACTOR 120V/1PH, ELECTRICAL CONTACTS AND WIRING, CONNECTION TO COOKING EQUIPMENT SHUT DOWN E18, E19, E23 AND E25, LOCATED UNDER THE HOOD. REFER TO FOOD SERVICE DRAWING 'EQUIPMENT PLAN & SCHEDULE FS-1.2.1'.
23. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL DUAL-CHANNEL SURFACE RACEWAY (WIREMOLD 6000 SERIES STEEL OR EQUAL) (AT 44" AFF TO SERVE COMPUTER DESKS). PROVIDE ALL REQUIRED END FITTINGS, ELBOWS, FACEPLATES, BRACKETS & HARDWARE TO SERVE DEVICES SHOWN. ALL OTHER RECEPTACLES SHALL BE ON WIREMOLD 500 SERIES STEEL SURFACE RACEWAY. PROVIDE COLOR TO MATCH ARCHITECTURAL WALL BASE. REFER TO A720, DETAIL 3 & 2.
24. COORDINATE ALL WALL MOUNTED DEVICES INSTALLATIONS IN THIS ROOM WITH WALL PADS.
25. PROVIDE CIRCUIT 120V/1P, WIRES AND CONDUITS FOR POWER TO DOOR STRIKES WHERE SHOWN. PROVIDE J-BOX ABOVE ACCESSIBLE CEILING UNLESS OTHERWISE COORDINATED IN FIELD. CONNECT TO LOCAL RECEPTACLE CIRCUIT.
26. PROVIDE 120V/20A JUNCTION BOX, WIRE AND CONDUIT FOR WALL MOUNTED NEW COMMERCIAL HAIR DRYER EXCEL #XLERATOR OR EQUAL.

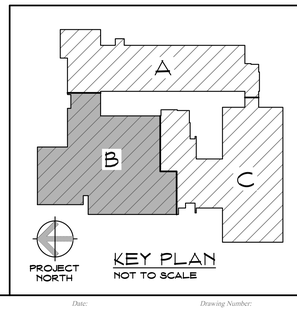
Note: 'WG' = EC SHALL PROVIDE WIRE GUARD.

NOTES:
- COORDINATE THE TEACHER DESK QUAD RECEPTACLES WITH IT AND FURNITURE PLANS.
- 'WG' = EC SHALL PROVIDE WIRE GUARD.

PHASE 1

ELECTRICAL NOTES: PART B

1. PANEL 'L' SHALL BE INSTALLED IN PHASE 1 (ROOM B123) WITH TEMPORARY FEEDER TO EXISTING PANEL 'B1', IN THE SAME ROOM.
2. EXISTING PA SYSTEM WILL REMAIN TEMPORARILY IN PH 1. REFER TO DRAWING 'ED002'. NEW PA SYSTEM LOCATION SHALL BE INSTALLED IN PHASE I AND A TEMPORARY LINK TO THE EXISTING SYSTEM SHALL BE PROVIDED.
3. NEW MAIN DATA /COMMUNICATION ROOM WILL BE CONSTRUCTED IN PHASE 1. CABLING FROM EXISTING MER WHICH IS DEMOLISHED IN PHASE 1 SHALL BE REWORKED OR TEMPORARILY SUPPORTED SO THAT IT REMAIN ACTIVE UNTIL NO LONGER REQUIRED.
4. EC SHALL TEMPORARILY LOCATE NEW FA REMOTE ANNUNCIATOR PANEL, FAAP CLOSE TO EXISTING IN THE EXISTING MAIN OFFICE. THE FAAP SHALL BE RELOCATED TO VESTIBULE C100 IN PHASE II. REFER TO POWER DRAWING E202 FOR FINAL LOCATION.



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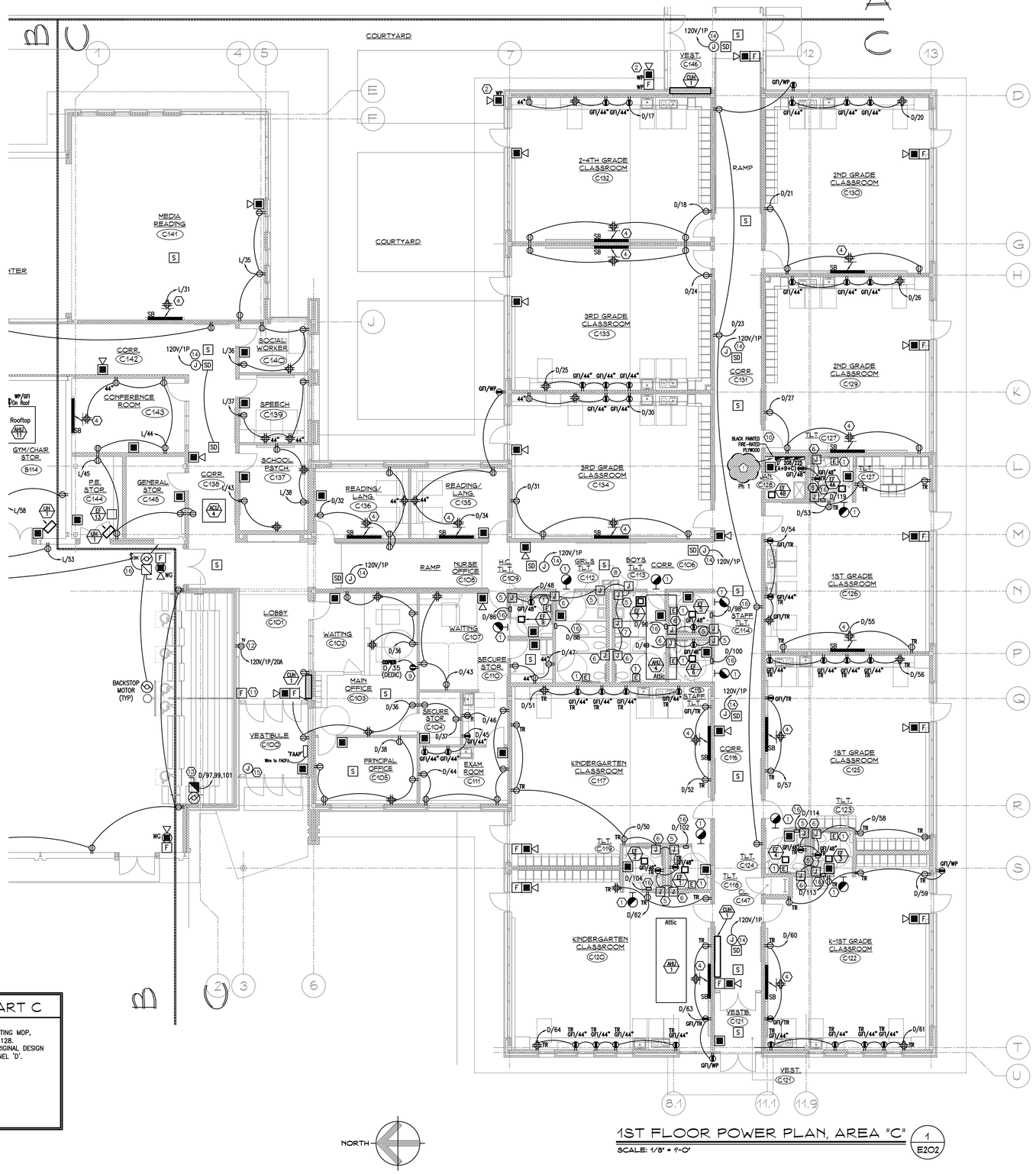
Revision:	Description:	Date:	Revised By:
--	ISSUED FOR BIDDING	NOV. 26, 2013	--

Drawing Title:
1ST FLOOR POWER PLAN, AREA "B"
State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E201



NORTH

1ST FLOOR POWER PLAN, AREA "C"

SCALE: 1/8" = 1'-0"

1 / E202

POWER PLAN NOTES

1. PROVIDE NEW HANDICAP CALL-FOR-AID SYSTEM. WIRE TO ROOM RECEPTACLE BRANCH CIRCUIT.

   USE: 'AUTHENTIC PARTS' #302-2C/#206-2 OR EQUAL

2. PROVIDE HORN/STROBE AND MANUAL PULL STATION TYPICAL WATER PROOF WITH UNIVERSAL PLATE, NEMA 3R, OUTDOOR RATING PER UL-50. EXACT LOCATION TO BE DETERMINED IN FIELD.

3. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL DUAL-CHANNEL SURFACE RACEWAY (WIREMOLD 5400 SERIES OR EQUAL) AT 18" AFF TO SERVE COMPUTER DESKS. PROVIDE 2" EMT IN WALL FOR DATA AND 1" FOR POWER TO DIVIDED OR MULTIPLE BACKBOXES. PROVIDE ALL REQUIRED END FITTINGS, ELBOWS, FACEPLATES, BRACKETS & HARDWARE TO SERVE DEVICES SHOWN. PROVIDE COLOR TO MATCH ARCHITECTURAL WALL BASE.

4. MOUNT ALL DEVICES ABOVE CENTER OF THE SMART BOARD. COORDINATE EXACT LOCATION IN FIELD WITH A/V CONTRACTOR. (3)

5. PROVIDE 120V/20A TO THE JUNCTION BOX. CONNECT BOX-MOUNT TRANSFORMER 'EL-208', 120VAC/24VAC, 100 VA, 50/60 HZ CLASS II, UL LISTED, TO SUPPLY VOLTAGE TO CONTROL MODULE FOR SENSOR OPERATED ELECTRONIC HAND WASHING FAUCET. A SINGLE TRANSFORMER OPERATE UP TO 6 FAUCETS. JUNCTION BOX SHOULD BE MOUNTED INSIDE CHASE WALL OR ABOVE CEILING. INSTALL TRANSFORMER WITHIN UNDER-LAVATORY ENCLOSURE. 18 GAUGE WIRE IS RECOMMENDED BY MANUFACTURER. COORDINATE WITH DIV. 22. CONNECT TO LOCAL RECEPTACLE CIRCUIT.

6. PROVIDE 120/20A JUNCTION BOX, WIRE AND CONDUIT TO INSTALL 'EL-154' TRANSFORMER FOR EACH FLUSH VALVE. A SINGLE TRANSFORMER OPERATE UP TO 10 FLUSH VALVES. COORDINATE WITH DIV. 22.

7. PROVIDE 120V TO THE JUNCTION BOX. CONNECT BOX MOUNT TRANSFORMER 120VAC/24VAC (50VA) TO SUPPLY VOLTAGE TO URINAL FLUSHOMETER WALL BOX CONTROL. A SINGLE TRANSFORMER OPERATE UP TO 10 FLUSHOMETERS. JUNCTION BOX SHOULD BE MOUNTED INSIDE CHASE WALL OR ABOVE CEILING. INSTALL TRANSFORMER WITHIN 50 FEET OF URINAL. 18 GAUGE WIRE IS RECOMMENDED BY MANUFACTURER.

8. PROVIDE 120V/1P/20A JUNCTION BOX FOR WALL-MOUNTED WATER COOLER. CONNECT TO THE RECEPTACLE CIRCUIT IN THE AREA. COORDINATE WITH DIV. 22.

9. COORDINATE EXACT LOCATION WITH THE OWNER.

10. PROVIDE BLACK PAINTED FIRE-RATED PLYWOOD BACKBOARD FOR WALL MOUNTED EQUIPMENT (TYP).

11. PROVIDE EXTENSION ELECTRICAL BOX TO COORDINATE WITH METAL WALL.

12. PROVIDE DEDICATED POWER FOR RECESSED TV BOX LEGRAND TYPE "TVWTVSSLA", COORDINATE WITH TECHNOLOGY CONTRACTOR FOR DETAILS.

13. PROVIDE NEW 30AMPS/208V/3Ø HEAVY-DUTY NON FUSIBLE SAFETY SWITCH, NEMA TYPE 1 ENCLOSURE, WIRES AND CONDUIT (SURFACE RACEWAY TO CEILING). PROVIDE CONNECTION TO CONTROL SWITCH AND 1/2HP, 208V/3Ø 1725 R.P.M. MOTOR FURNISHED WITH BLEACHERS. COORDINATE WITH BLEACHERS MANUFACTURER PRIOR ROUGH-IN, THE LOCATION AND HEIGHT OF THE DISCONNECT.

14. PROVIDE CONTROL CIRCUIT TO J-BOX ABOVE CEILING FOR ZONE DAMPERS IN THIS AREA. PROVIDE ADDRESSABLE FLASHSCAN INTELLIGENT RELAY FOR EACH CLOSED GROUP, MAXIMUM OF 6. COORDINATE LOCATION AND 120 OR 24 VOLT REQUIREMENT WITH HVAC CONTRACTOR DIV. 23.

15. PROVIDE CIRCUIT 120V/1P, WIRES AND CONDUITS FOR POWER TO DOOR STRIKES WHERE SHOWN. PROVIDE J-BOX ABOVE ACCESSIBLE CEILING UNLESS OTHERWISE COORDINATED IN FIELD. CONNECT TO LOCAL RECEPTACLE CIRCUIT.

16. PROVIDE 120V/20A JUNCTION BOX, WIRE AND CONDUIT FOR WALL MOUNTED NEW COMMERCIAL HAIR DRYER EXCEL XLERATOR OR EQUAL.

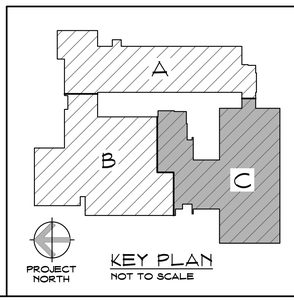
NOTE:
- COORDINATE THE TEACHER DESK QUAD RECEPTACLES WITH IT AND FURNITURE PLANS.

ELECTRICAL CONTRACTOR SHALL MOUNT ALL WALL RECEPTACLES AT 26"AFF TO THE CENTER OF THE BOX. COORDINATE IN FIELD WITH BASEBOARDS RADIATION.

PHASE 1

ELECTRICAL NOTES: PART C

1. PROVIDE IN PHASE I THE TEMPORARY FEEDER FROM EXISTING MDP, ELECTRICAL ROOM, TO NEW AREA 'C' PANEL 'D', ROOM C128. ELECTRICAL CONTRACTOR SHALL PROVIDE FEEDER PER ORIGINAL DESIGN DRAWINGS, ON PHASE II, FROM NEW PANEL 'SDP' TO PANEL 'D'.



KEY PLAN
NOT TO SCALE

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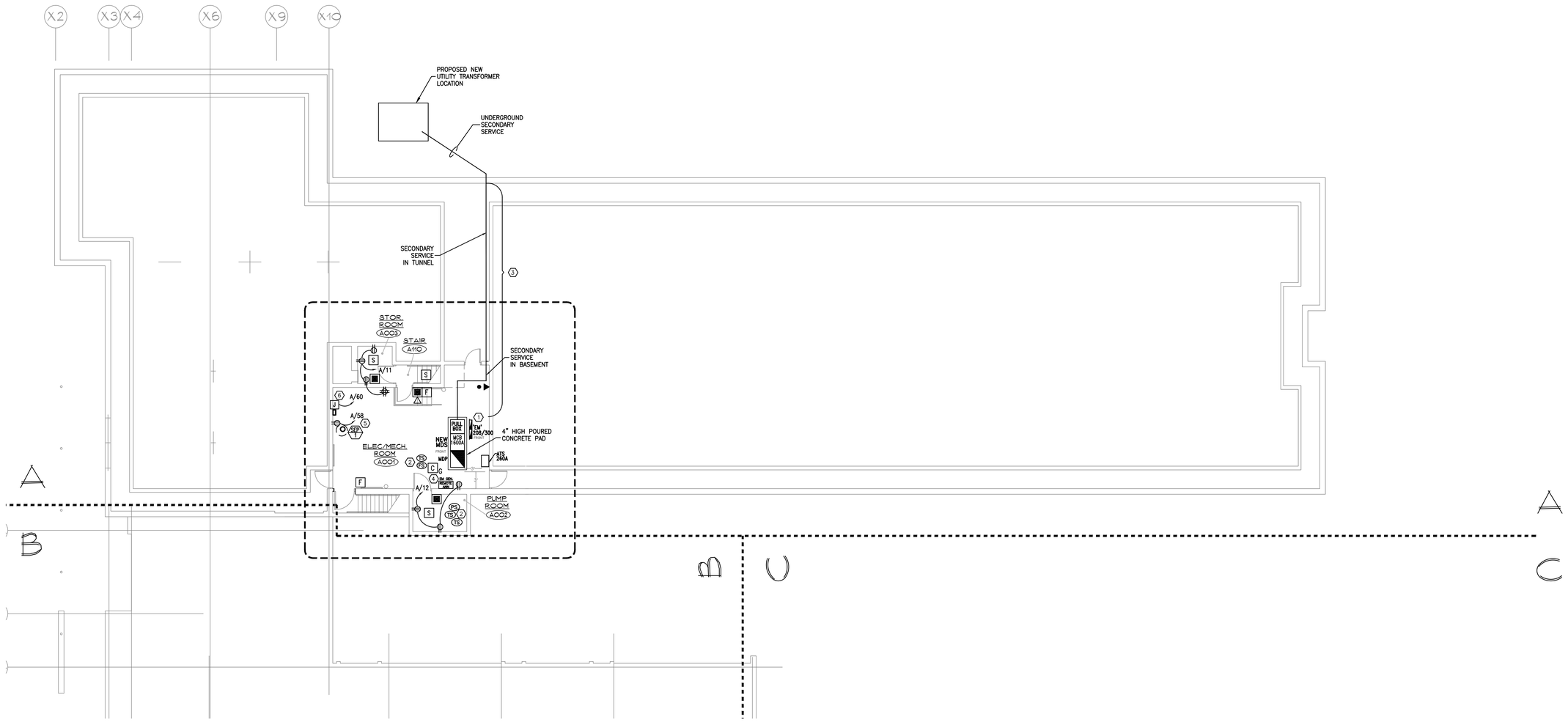
Revision:	Description:	Date:	Revised By:
--	ISSUED FOR BIDDING	NOV. 26, 2013	--

Drawing Title:
1ST FLOOR POWER PLAN, AREA "C"

State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140

Drawing Number: E202



BASEMENT & TUNNEL POWER PLAN (1/E203)

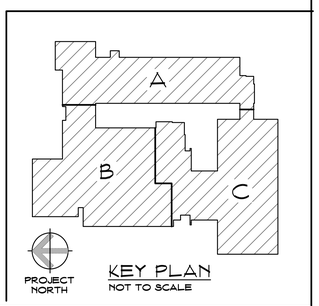
SCALE: 1/8" = 1'-0"

NORTH

POWER PLAN NOTES

1. PROVIDE NEW UNISTRUT RACK FOR NEW EMERGENCY PANELS. PROVIDE ALL NECESSARY: MOUNTING, ADAPTER AND SHELF BRACKETS, HARDWARE, SUPPORTS AND ACCESSORIES, BRACES AND WIRES AND CONDUITS FOR PANELS. MOUNT BACK TO BACK OF MDS/MDP PANELS.
2. PROVIDE FIRE ALARM MODULES FOR EACH FIRE PROTECTION TAMPER, FLOW AND PRESSURE SWITCH. COORDINATE QTY AND LOCATION WITH FIRE PROTECTION CONTRACTOR AND FIRE MARSHAL. WIRE TO FIRE ALARM SYSTEM.
3. THIS PORTION OF CONDUITS SHALL BE ENCASED IN CONCRETE.
4. EMERGENCY GENERATOR REMOTE ANNUNCIATOR SHALL BE CONNECTED TO FACP. PROVIDE WIRES AND CLOSED CONTACT RELAY, WHICH OPEN WHEN EMERGENCY ALARM ANNUNCIATOR TURNS OFF, IN CASE OF ALARM SITUATION.
5. PROVIDE DEDICATED RECEPTACLE, 120V/1Ø TO SUPPLY VOLTAGE TO, 1/2 HP, SEP-1, SUMP PUMP.
6. PROVIDE J-BOX, 120V/1Ø TO SUPPLY VOLTAGE TO, SEP-1 CONTROLS.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND.



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State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140

Drawing Number: E203

LIGHTING FIXTURE SCHEDULE

DESIGNATION	DESCRIPTION	MANUFACTURER/ MODEL NUMBER	LAMP			ELECTRICAL			NOTES
			TYPE	COLOR TEMP	NO	BALLAST	VOLTAGE	WATTS	
A	SUSPENDED D/I 4', 2 ROWS OF PERFORATIONS	FINELITE S12-P-4'-2T8-SC-91W-120-FA50"	32W, T8	4100K	2	DIMMING	120	64	1 6
B	ACRYLIC LENS TROFFER, .125" LENS 2'x2', RECESSED, GRID, STATIC	DAY-BRITE LIGHTING-STATIC RECESSED 2TG8217-21-UNV-1/2-EB	T8,17W, 24" STRAIGHT	4100K	2	ELECTRONIC	120	34	
B1	ACRYLIC LENS TROFFER, .125" LENS 2'x2', SURFACE MODULAR	DAY-BRITE LIGHTING 2SMR231U6-FS12-120-1/2-EB	T8-U 31W	4100K	2	ELECTRONIC	120	62	
B2	ACRYLIC LENS TROFFER, .125" LENS 2'x2', RECESSED, GRID, STATIC	DAY-BRITE LIGHTING 2TG8231U6-12-120-1/2-EB	T8-U 31W	4100K	2	ELECTRONIC	120	62	
B3	ACRYLIC LENS TROFFER, .125" LENS 2'x2', RECESSED, GRID, STATIC	DAY-BRITE LIGHTING 2TG8224HO-12-120-1/2-EB	T5HO 24W	4100K	2	ELECTRONIC	120	48	
B4	ACRYLIC HIGH LIGHT LINEAR TRAN. PRISMATIC LENS 2'x2', RECESSED, GRID/SLOT, STATIC	PHILIPS -LIGHTOLIER HR52GJ224120PF	T5HO 24W	4100K	2	DIMMING	120	48	
B5	ARIOSO ACRYLIC LENSED TROFFER D/I 2'x2', RECESSED, GRID, STATIC	DAY-BRITE LIGHTING 2AVG224HO-ACR-UNV-1/2EBD-AVHD	T5HO 24W	4100K	2	DIMMING	120	48	
B6	ACRYLIC LENSED TROFFER - WET LOCATION 2'x2', RECESSED, GRID, STATIC,	DAY-BRITE LIGHTING 2DPWLG317-FA21-120-1/3-EB101-3W	T8 17W	4100K	3	ELECTRONIC	120	51	
B7	ACRYLIC LENSED TROFFER - WET LOCATION 2'x2', RECESSED, GRID, STATIC,	DAY-BRITE LIGHTING 2DPWLG417-FA21-120-1/3-EB101-3W	T8 17W	4100K	4	ELECTRONIC	120	68	
B8	HI EFFICENCY ARCHITECTURAL 2'x2', LENS, RECESSED, STATIC	DAY-BRITE LIGHTING-ATTUNE 2ATNG2CF40-D-120-1/2-EB	TT5-4PIN 40W	4100K	2	ELECTRONIC	120	80	
B9	ARIOSO ACRYLIC LENSED TROFFER D/I 2'x2', RECESSED, GRID, STATIC	DAY-BRITE LIGHTING 2AVG2CF40-ACR-UNV-1/2EBD-AVHD	TT5-4PIN 40W	4100K	2	ELECTRONIC	120	80	
C	SURFACE WRAPAROUND 4' LENGTH	DAY-BRITE LIGHTING OWN232-120-1/2EB	32W T8	4100K	2	ELECTRONIC	120	64	
D	FLUORESCENT DOWNLIGHT 6" ROUND, OPEN, HORIZONTAL	OMEGA LIGHTING, SPEX S61H26QPLU-T61HQPLCSS	QPL 26W	4100K	1	ELECTRONIC	120	26	
D1	DOWNLIGHT WALL WASH LED HIGH EFFICIENCY PHOSPHOR TECHNOLOGY	PHILIPS - OMEGA REVELATION OM6LED27 - R6LED40KWWCS	LED	4000K	---	NO BALLAST	120	27	
D2	BATHROOM SHOWER FIXTURE FLUR LAMP, 6" SHALLOW RECESSED	DAY-BRITE LIGHTING, OMEGA-SPEX S6SRD1H32PLTU-T6SRD1HSHWRCP	32W PLT	4100K	1	ELECTRONIC	120	32	
E1	EXIT LIGHT - LED, SINGLE FACE SELF-CONTAINED, END/BACK/TOP MOUNT	EVENLITE-SENTRY CCDS-AC-R-1-WW-CN	LED	---	---	NO BALLAST	120	4	4
E2	EXIT LIGHT - LED, DOUBLE FACE SELF-CONTAINED, END/BACK/TOP MOUNT	EVENLITE-SENTRY CCDS-AC-R-2-WW-CN	LED	---	---	NO BALLAST	120	4	4 5
EU	EXIT LIGHT & ILLUM. SIGN FOR ACCESSIBLE EXIT W/UNIVERSAL WHEELCHAIR SYMBOL, SELF-CONT.	TELESIS-EVENLITE TLA-AC-R-1-W-CN	LED	---	---	NO BALLAST	120	4	2 4
E3	OUTDOOR EXIT LIGHT - LED, SINGLE FACE SELF-CONTAINED, END/BACK/TOP MOUNT	EVENLITE-SENTRY CDW-AC-R-1-WW-CN-BZ	LED	---	---	NO BALLAST	120	4	4
EU1	OUTDOOR ILLUM. SIGN FOR ACCESSIBLE EXIT - SF W/UNIVERSAL WHEELCHAIR SYMBOL, SELF-CONT.	EVENLITE-SENTRY CDW-AC-R-1-WW-CN-SA	LED	---	---	NO BALLAST	120	4	4 5
ER	REMOTE EXIT LIGHT, SELF-CONT. WALL MOUNT, 12" AFF	TELESIS-EVENLITE TLA6-AC-R-1-W-CN-WG70	LED	---	---	NO BALLAST	120	4	2 4
G	LENSED FLUORESCENT HIGH BAY T5HO LAMPS	PHILIPS-OPTIMUM LIGHTING GX-DL2-6-54-12-3-HI-E-WG	T5HO, 54W, 48" STRAIGHT	4100K	6	ELECTRONIC	120	324	2 13
O	UNDER CANOPY, LED, ROUND LENSED, LOW PROFILE	PHILIPS - LIGHTOLIER LYTECASTER 1050LRN09D1 - 1050LRNDLCDW	LED 35W	---	---	---	120	35	7
ON1	OUTDOOR SURFACE WALL MOUNTED LED, MARINE GRADE AL HOUSING W/DIE-CAST END CAPS	MILLENIUM AURACYL SCONCE-KENALL MLAS813PAN CAP WS 14L40K-120	LED 14W	---	---	---	120	14	8 IP64
OSF	EXTERIOR TRAPEZOIDAL FULL CUTOFF, 101 PERFORMANCE SCONCE, WALL MOUNTED	PHILIPS-GARDCO 101-MT-(2)42TRF-120-BRP	42W TRF	4100K	2	ELECTRONIC	120	84	8
P1	COMPACT FLUORESCENT GLASS PENDANT	PHILIPS-OMEGA IAN8-42PLT-OP-S-FLD-U	42W PLT	4100K	1	ELECTRONIC	120	42	3
P2	CEILING PENDANT WITH CLEAR ACRYLIC PRISMATIC DIFFUSER, PRISMA 1601	PRISMA - LUMINIS LIGHTING PR1601-F270-120V-L16-BA16-STA	70W CF (GX24q)	4100K	2	ELECTRONIC	120	140	9
P3	CEILING PENDANT WITH CLEAR ACRYLIC PRISMATIC DIFFUSER, PRISMA 1201	PRISMA - LUMINIS LIGHTING PR1201-F170-120V-L16-BA12-STA	70W CF (GX24q)	4100K	1	ELECTRONIC	120	70	9
S1	WALL MOUNTED FLUORESCENT SCONCE	LIGHTOLIER - ALTER SOFT LIGHTING QVW8SPFGOS2FT120BE	40W TT5	4100K	2	ELECTRONIC	120	80	
S2	WALL MOUNTED FLUORESCENT SCONCE	PHILIPS DAY-BRITE - ARIOSO SCONCE AVS2CF18-SPMW-120-1/2	18W TT5	4100K	2	ELECTRONIC	120	36	
ST1	POLE LIGHTING FIXTURE LED	GARDCO-PUREFORM P21-A1-1-3-130LA-CW	130W LED	---	---	---	120	130	
ST2	POLE LIGHTING FIXTURE LED	GARDCO-PUREFORM P21-A-2-4-130LA-CW	130W LED	---	---	---	120	260	
ST3	POLE LIGHTING FIXTURE LED	GARDCO-PUREFORM P21-A1-1-4-130LA-CW	130W LED	---	---	---	120	130	
T	WALL MOUNT COMPACT FLUORESCENT LUMINAIRE - TUNNELS	KALEIDOSCOPE - VAPORTITE SERIES RLW26HGLCGC-1	26W PLT	4100K	1	ELECTRONIC	120	26	
T1	LINEAR LED - TROPHY DISPLAY	VISUAL LIGHTING TECHNOLOGY - ESSENTIALLED LINEAR ELL-10L-2545-40-AL-PG-WE1- Use Code Length	.25W	4000K		DRIVER CLASS 2 UL	120/24Vdc	VARY BY LOC LENGTH	14
U1	UNDER CANOPY, COMPACT FLUORESCENT, HIGH ABUSE ENVIRONMENTAL	MILLENIUM - KENALL MR13FL-PIA-MW-26Q-2-120	26W QUAD	4100K	2	ELECTRONIC	120	52	
W	WALL MOUNT - SMALL LOW PROFILE WALL PACK -STAIR LIGHTING	PHILIPS DAY-BRITE OUTDOOR WLT070MDT-LP	70W MH	4100K	1	MH-EPS	120	70	8
WB	WALL BRACKET, FLUORESCENT FIXTURE, 2', CLEAR ACRYLIC REFRACTOR	PHILIPS DAY-BRITE LIGHTING WB217-CP-120-1/2EB	17W T8	4100K	2	ELECTRONIC	120	34	

LIGHTING SCHEDULE NOTES

1. CONTRACTOR TO SUPPLY A UL LISTED GRIDBOX ADJUSTABLE AIRCRAFT SUPPORT ASSEMBLY, OR EQUIVALENT, FOR PENDANT LUMINAIRES SUSPENDED FROM GRID T-BAR. USE STANDARD 0-10VDC ADVANCE MARK 7 DIMMING BALLAST. ON THE CLASSROOMS, PENDANT FIXTURES TYPE 'A' SHALL BE INSTALLED AT 8' AFF TO THE BOTTOM OF THE FIXTURES.
2. PROVIDE WIRE GUARD FOR ALL NEW EXITS AND 'G' LIGHT FIXTURES IN GYM AREA.
3. PROVIDE FACTORY (5) FIVE FEET STEM. ADJUST IN FIELD THE LENGTH, COORDINATE LENGTH WITH ARCHITECTURAL DRAWINGS. BODY COLOR SATIN-NICKEL PER ARCHITECTURAL REQUEST. LOBBY C101 STEM SHALL BE 4'-2" PER ARCHITECTURAL DRAWINGS.
4. PROVIDE W/ FEATURES AND ACCESSORIES NECESSARY FOR UNIVERSAL (TOP, BACK, & END) MOUNTING AND DIRECTIONAL ARROW KNOCKOUTS. ARROWS ON PLANS INDICATE DIRECTION OF CHEVRONS. SHADING INDICATES FIXTURE FACE. CHEVRON & LETTERING SHALL COMPLY W/ NFPA 101.
   ALL EMERGENCY EXITS SHALL BE ON THE EMERGENCY PANEL 'EM', POWERED BY THE THE EMERGENCY GENERATOR, AND WITH ONE UL924 RELAY PER SWITCHED AREA.
5. FURNISH EXIT LIGHT COMBINATION WITH UNIVERSAL WHEELCHAIR SYMBOL, MINIMUM 6" HIGH IN ACCORDANCE WITH IBC 1011.1.2., MOUNT AT THE SAME HEIGHT AS EXIT LIGHT.
6. FURNISH LIGHT FIXTURES WITH DAY-LIGHT SENSOR FOR CLASSROOMS, CONNECT TO ONE ROW LIGHTING FIXTURES CLOSE TO WINDOW. FOR TYPICAL CLASSROOM USE WATTSTOPPER TYPE "LMDM-101" DIGITAL DIMMING WALL SWITCH, ASSOCIATED WITH DIMMING ROOM CONTROLLER TYPE "LMRC-212".
7. PROVIDE LED LIGHT ENGINE 1050LRN0935.
8. UL LISTED FOR WET LOCATIONS. WLT - CERTIFIED TO MEET UL 1598.
9. PROVIDE WITH SATIN ANODIZED BRIGHTNESS CONTROL BAND (ALUMINUM TRIM) (-BA16) FOR PR1601 AND (-BA12) FOR PR1201 COORDINATE WITH ARCHITECTURAL DRAWINGS FOR STEM HEIGHT. SEE BELOW P2 AND P3 FIXTURES' CHART DETAILS.
10. ALL EXTERIOR FIXTURES AND INTERIOR FIXTURES IN UNHEATED SPACES SHALL BE CAPABLE OF OPERATING IN COLD TEMP (0° F).
11. TYPICAL ELECTRONIC BALLAST SHALL HAVE MAXIMUM TOTAL HARMONIC DISTORTION OF TWENTY PERCENT (20%)
12. FIXTURE MOUNTED IN T-BAR CEILING (GRID) SHALL BE PROVIDED WITH Q1033 (SET OF TWO) (2) 24" EXPANDABLE T-GRID OR WOOD JOIST (PAIR) BAR HANGERS. E.C. TO DETERMINE NUMBERS OF FIXTURES IN FIELD.
13. HIGH BALLAST FACTOR ELECTRONIC PROGRAMMED-START (T5HO). ALL FIXTURES MUST BE 'UL' AND 'CUL' LISTED
14. PRIOR ORDERING THE THE LINEAR LED, MOUNTED VERTICAL IN ALL 4 TROPHY DISPLAYS, EC MUST MEASURE THE HEIGHT ON EACH DISPLAY WALL AND ASSURE TOP BOTTOM TOLERANCE, USE CODE FROM CUT-SHEET CHART. PROVIDE DRIVER FOR LED AND WALL SWITCH ON EACH DISPLAY. http://www.visual-lighting.com/#LED/VLTLED/EssentialLEDs.

NOTES:
THE METAL FRAME/BODY UPPER SIDE ON ALL PENDANT FIXTURES BY ARCHITECTURAL CHOICE SHALL BE SATIN-NICKEL COLOR. OTHER FIXTURES SHALL BE WHITE FRAME, UNLESS SPECIFICALLY NOTED OTHERWISE. COORDINATE WITH ARCHITECT.

MOUNT THE EXIT SIGNS ON THE CURTAINWALL ABOVE THE ENTRANCES' HEAD RAILS WHERE SHOWN ON THE LIGHTING DRAWINGS. PROVIDE THE WIRES THROUGH MULLIONS TO POWER THE EXIT UNITS. REFER TO ARCHITECTURAL DRAWINGS FOR EXTERIOR WALL MOUNTED FIXTURE HEIGHT AND EXACT LOCATIONS.

FIXTURE NAME	FIXTURE TYPE	FIXTURE HEIGHT	ROOMS NAME/NR.	AFF HEIGHT
P2	PR1601-F270	17.5'	MEDIA CENTER READING	11' * **
P3	PR1201-F170	14'	MEDIA CENTER STACKS BELOW THE METAL GRID	18'-4" **

NOTE:

* IN MEDIA CENTER ROOM C141, ALL PENDANT FIXTURES TYPE "P2" CAN ALL BE SET UNIFORMLY AT 11'-0" ABOVE THE FINISH FLOOR TO BOTTOM OF FIXTURES, PER ARCHITECT REQUEST.

** MEASURE PRIOR ORDERING THE STEM LENGTH. COORDINATE IN FIELD WITH FINAL STRUCTURAL END SUPPORT CONNECTION. REFER TO ARCHITECT AND ARCHITECTURALURAL SECTIONS FOR FINAL AFF HEIGHTS.

IMP. NOTE: EQUAL OF P2, P3 AND G FIXTURES MUST BE APPROVED BY ENGINEER PRIOR ANY OF FIELD WORK, ALONG WITH IES PHOTOMETRICAL CALCULATION RESULT OF THE AREA WHERE TO BE INSTALLED. FIXTURES P2 AND P3 SHALL HAVE SATIN ANODIZED BRIGHTNESS CONTROL BAND AS SHOWN, NO EXCEPTIONS WILL BE GRANTED.

LIGHTING SCHEDULE AND LEGEND — 1 E300
SCALE: AS NOTED

LEGEND NOTES:

- REFER TO DRAWING '1-LINE DIAGRAM' 'E301' & 'FA RISER DIAGRAM' 'E302' (FIRE ALARM LEGEND), AND DRAWING 'FP401' FOR ADDITIONAL SYMBOLS.
- PROVIDE BLACK PAINTED FIRE-RATED PLYWOOD BACKBOARD FOR WALL MOUNTED EQUIPMENT (TYP. PANELBOARDS, PHONE ETC.). ANCHOR AS REQUIRED FOR SEISMIC LOAD.
- COORDINATE IN FIELD WITH A/V CONTRACTOR FOR EXACT RECEPTACLE AND RECESSED TV BOXES LOCATION TO MATCH DATA, AND PROVIDE CONDUIT AND WIRING.

ELECTRICAL LEGEND

(NOT ALL SYMBOLS ARE USED)

- ELECTRICAL PANEL, 120/208 VOLT.
- PANELBOARD FLUSH MOUNTED.
- PANELBOARD SURFACE MOUNTED.
- NON-FUSED DISCONNECT SWITCH.
- FUSED DISCONNECT SWITCH.
- J / (J) JUNCTION BOX, ACCORDING TO NEC REQUIREMENTS.
- MOTOR STARTER. COORDINATE EXACT REQUIREMENTS WITH MOTOR FURNISHED.
- RECESSED LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE.
- RECESSED LIGHT FIXTURE ON UL924 RELAY CONTROL FROM EMERGENCY BRANCH CIRCUIT.
- TYPICAL RECESSED FLUORESCENT TROFFER; SUBLETTER INDICATES FIXTURE TYPE & SIZE.
- LIGHT FIXTURE ON UL924 RELAY CONTROL FROM EMERGENCY BRANCH CIRCUIT.
- RECESSED HIGH EFFICIENCY GLARE CONTROL FIXTURE; SUBLETTER INDICATES FIXTURE TYPE & SIZE.
- TYPICAL SURFACE MOUNTED OR CABLE HUNG FLUORESCENT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE & SIZE.
- WALL MOUNTED FIXTURE; SUBLETTER INDICATES FIXTURE TYPE.
- WALL MOUNTED FIXTURE ON UL924 RELAY CONTROL FROM EMERGENCY BRANCH CIRCUIT; SUBLETTER INDICATES FIXTURE TYPE.
- E1 CEILING MOUNTED EXIT SIGN. SHADING INDICATES DIRECTION OF FIXTURE FACE. ARROW INDICATES DIRECTION OF CHEVRON. PROVIDE UNSWITCHED POWER FROM AREA EMERGENCY LIGHTING CIRCUIT.
- E1 WALL MOUNTED EXIT SIGN. INSTALL AT 7'-6" AFF OR ON EXISTING LOCATION.
- E2 DOUBLE FACE EXIT SIGN.
- E3 WALL MOUNTED OUTDOOR WET LOCATION EXIT SIGN. INSTALL AT 7'-6" AFF OR ON EXISTING LOCATION.
- EU COMBINATION EXIT AND HANDICAP SIGN INSTALL AT 7'-6" AFF OR AS NOTED. ARROW INDICATES OF CHEVRON. PROVIDE UNSWITCHED POWER FROM AREA EMERGENCY LIGHTING CIRCUIT.
- TWIN HEAD EMERGENCY LIGHT WITH INTEGRAL BATTERY FOR 90 MINUTE EMERGENCY LIGHTING.
- $ SINGLE-POLE SWITCH; MOUNT AT 48" AFF.
- $3 3-WAY SWITCH; MOUNT AT 48" AFF.
- $4 4-WAY SWITCH; MOUNT AT 48" AFF.
- $M SINGLE-POLE, MOTION SENSOR SWITCH; MOUNT AT 48" AFF.
- $D FLUORESCENT DIMMING CONTROL COMPATIBLE WITH DIMMING BALLASTS.
- $K/$3K KEYED SINGLE-POLE OR 3-WAY SWITCH; MOUNT AT 48" AFF.
- CEILING MOUNTED OCCUPANCY SENSOR. REFER TO SPECIFICATION 16500 FOR DETAILS.
- DUPLEX RECEPTACLE; MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED.
- 250-VOLT, NEMA TYPE RECEPTACLE IN FLUSH OUTLET BOX (2P OR 3P MARKED ON DRAWING).
- QUAD RECEPTACLE; MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED.
- POWER RECEPTACLE INSTALLED ABOVE CEILING OR ON STRUCTURE AS SHOWN ON POWER PLANS.
- GFI DUPLEX GROUND FAULT RECEPTACLE; MOUNT AT 18" AFF UNLESS OTHERWISE SPECIFIED.
- WP RECEPTACLE WITH OUTDOOR RATED COVER PLATE. PROVIDE FLUSH MOUNTED BOX.
- TR TAMPER RESISTANCE RECEPTACLE.
- DX COMPUTER NETWORK WORKSTATION PORT. MOUNT AT 18" AFF UNLESS OTHERWISE NOTED. D:X = NUMBER OF DATA OUTLETS. PROVIDE CAT6A CABLE (4 PAIR UTP) ON EACH LOCATION AS NOTED.
- TELEPHONE JACK LOCATION. PROVIDE 4" SQUARE BOX, 1-GANG RING & 3/4" CONDUIT TO CEILING SPACE. PROVIDE CAT6A CABLE (4 PAIR UTP) ON EACH LOCATION.
- V/D X/X VOICE/DATA OUTLET, 4" X 4" OUTLET BOX WITH A 1 GANG COVER 18 INCHES ABOVE FINISHED FLOOR OR AS NOTED WITH 3/4" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING. V:X/D:X = NUMBER OF VOICE/DATA PORTS. PROVIDE CAT6A CABLE (4 PAIR UTP) ON EACH LOCATION. COORDINATE WITH A/V CONTRACTOR.
- D CLASSROOM TELEPHONE. D = DESK MOUNT, OTHERWISE WALL MOUNT. MOUNT JACKS FOR DESK UNITS UNITS AT 18" AFF. MOUNT JACKS FOR WALL UNITS AT 48" (60") AFF FOR GENERAL LOCATIONS. PROVIDE CAT6A CABLE (4 PAIR UTP) ON EACH LOCATION. COORDINATE EXACT LOCATION WITH THE OWNER.
- FLUSH OUTLET BOX FOR WALL-MOUNTED TELEPHONE 48" AFF OR AT HEIGHT INDICATED ON PLAN, WITH 3/4" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE CAT6A CABLE (4 PAIR UTP) ON EACH LOCATION.
- 12" ROUND, BATTERY POWER WIRELESS CLOCK. WALL MTD. 8'-6" AFF OR 8" BELOW CEILING. GYM CLOCK MUST BE PROVIDED WITH PROTECTIVE STEEL WIRE GUARD. REMOVE EXISTING CLOCKS AND INSTALL NEW IN SAME LOCATION.
- S 8" RECESSED CEILING SPEAKER WITH BACKBOX, TILE BRIDGE & BAFFLE.
- (S) WALL MOUNTED PA SYSTEM SPEAKER. MOUNT 8'-6" AFF OR 8" BELOW CEILING.
- TV TV COAXIAL JACK LOCATION. PROVIDE NEW JACK & COAXIAL CABLE TO HEADEND EQUIPMENT. COORDINATE REQUIREMENTS OF JACK & CABLE WITH OWNER & SYSTEM INSTALLER. SEE ALSO DETAIL DRAWING 'E303' CATV SYSTEM ELECTRICAL NOTE.
- E CALL-FOR-AID SWITCH. MOUNT AT 36" AFF, W/ PULL CORD HANGING DOWN TO 6" AFF.
- CALL-FOR-AID CORRIDOR LIGHT/BUZZER. MOUNT AT 7'-6" AFF.
- E EMERGENCY POWER SHUT-OFF SWITCH WITH KEY RESET. MOUNT WITH OPERATOR AT 48" AFF.
- AOR AREA OF REFUGE REMOTE COMMUNICATION DEVICE.
- AORM AREA OF REFUGE MASTER STATION. LOCATION TO BE COORDINATED W/ FIRE DEPARTMENT.
- AOR AREA OF REFUGE ILLUMINATED SIGN WITH UNIVERSAL WHEELCHAIR SYMBOL AND 90 MINUTE BATTERY BACKUP, SURFACE MOUNT.
- XXX/1 EQUIPMENT TAG.
- CKT BRANCH CIRCUIT HOMERUN (VOLTAGE, BRANCH CIRCUIT POLES).
- TR TAMPER-RESISTANT (OUTLET).
- NL LIGHT FIXTURE TIED TO UNSWITCHED NIGHT LIGHTING CIRCUIT.
- EX EXISTING TO REMAIN.
- RELOC RELOCATE/RELOCATED AT THE SAME HEIGHT (PER NEC REQUIREMENTS).
- R EXISTING FIXTURE OR DEVICE TO BE REMOVED.
- PRTR PRINTER.
- LIGHT FIXTURE EXISTING.
- RECP DEMO.
- SW DEMO.
- PE DAY-LIGHT SENSOR.
- TC TIME CLOCK.
- AP WIRELESS ACCESS POINT (CABLE AND JACK ONLY IN THIS SCOPE).
- A ELECTRICAL ALARM BELL, FOR DRY AND WET CONDITIONS.
- SB ELECTRONIC SMART BOARD, TYP. TO MATH & SCIENCE CLASSROOMS, AS WELL AS (2) MEDIA CENTER, PROVIDE DATA AND POWER TO SB AND TEACHER DESK AS IN MEDIA CENTER. COORDINATE LOCATIONS IN FIELD.
- TV CCTV CAMERA EXISTING.
- TV CCTV CAMERA.
- PS PROJECTOR SCREEN.
- DIGITAL PROJECTOR CEILING MOUNTED.
- SECURITY CAMERA DOME.
- ALL SHADED FIXTURES MUST BE CONNECTED TO AN EMERGENCY CIRCUIT TO THE EMERGENCY PANEL 'EM' LOCATED IN BASEMENT RM A001, VIA UL924 EMERGENCY LIGHTING RELAY.
- E EMERGENCY STOP. WIRE TO MAIN GAS VALVE. COORDINATE IN FIELD WITH DIV. 22 THE SEQUENCE OF OPERATION AND EXACT LOCATION.
- MGV MAIN GAS VALVE.
- TELECOMMUNICATION GROUNDING BUSBAR PER DIVISION 27 SPECIFICATIONS. CONNECT TR ROOMS GND BUSBARS TO MER ROOM MAIN GND BUSBAR. COORDINATE IN FIELD FOR DETAILS WITH A/V CONTRACTOR MANAGER.
- POWERED DOOR OPERATOR FURNISHED WITH DOOR HARDWARE. PROVIDE 120V CONNECTION FROM LOCAL RECEPTACLE CIRCUIT. PROVIDE RACEWAY & CONTROL WIRE TO PUSHBUTTON LOCATION COORDINATED IN FIELD.

Project Title:
Expansion and Renovate as New Project - PHASE 1 of 3
Crystal Lake Elementary School
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Ellington, Connecticut 06029

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Revision:	Description:	Date:	Revised By:
--	ISSUED FOR BIDDING	NOV. 26, 2013	--

Drawing Title:
LIGHTING SCHEDULE AND LEGEND

State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: NTS
Drawn By: MS-ELE ENG
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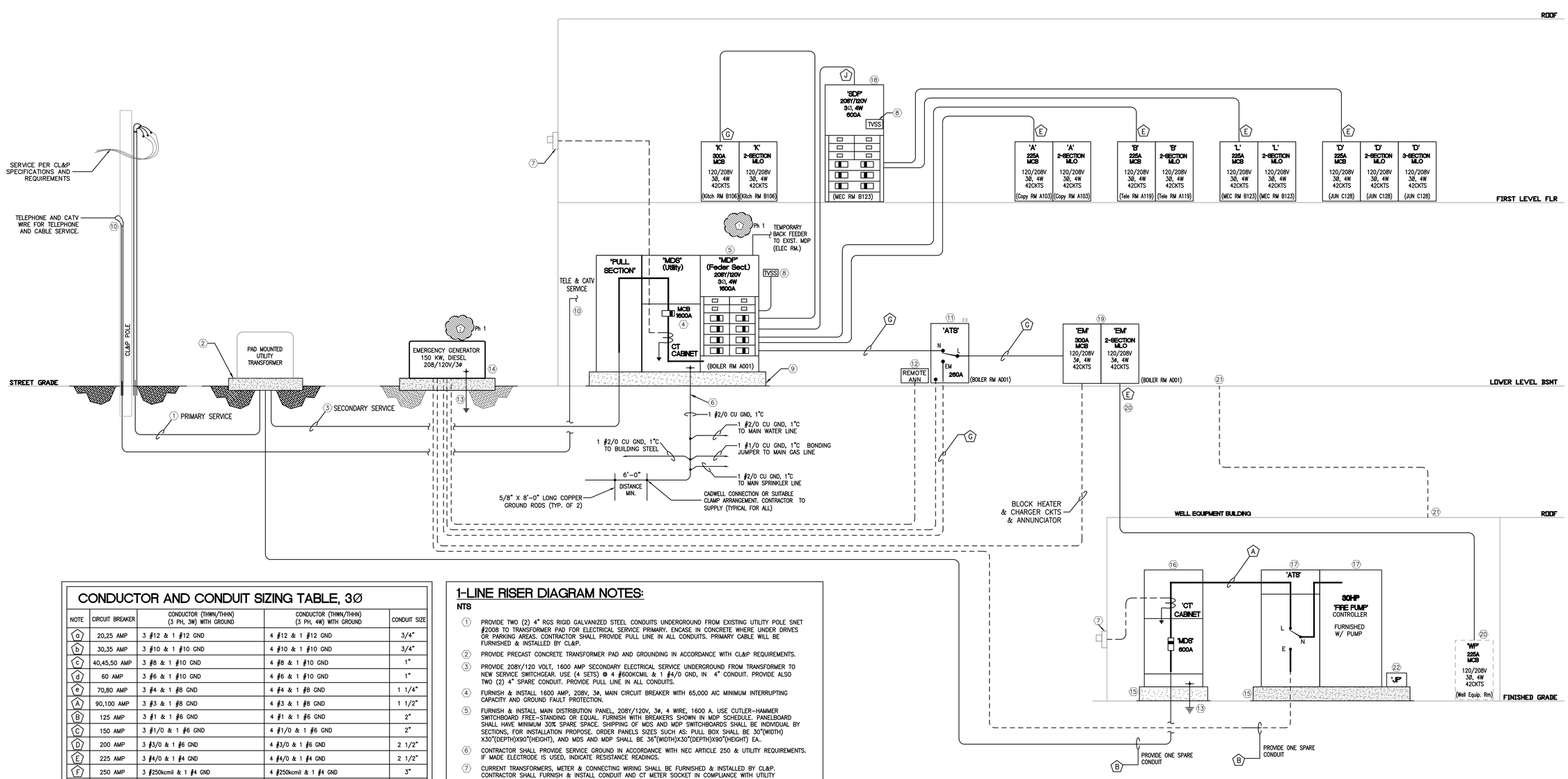

CONDUCTOR AND CONDUIT SIZING TABLE, 3Ø

NOTE	CIRCUIT BREAKER	CONDUCTOR (THWN/THHN) (3 PH, 3W) WITH GROUND	CONDUCTOR (THWN/THHN) (3 PH, 4W) WITH GROUND	CONDUIT SIZE
a	20,25 AMP	3 #12 & 1 #12 GND	4 #12 & 1 #12 GND	3/4"
b	30,35 AMP	3 #10 & 1 #10 GND	4 #10 & 1 #10 GND	3/4"
c	40,45,50 AMP	3 #8 & 1 #10 GND	4 #8 & 1 #10 GND	1"
d	60 AMP	3 #6 & 1 #10 GND	4 #6 & 1 #10 GND	1"
e	70,80 AMP	3 #4 & 1 #8 GND	4 #4 & 1 #8 GND	1 1/4"
A	90,100 AMP	3 #3 & 1 #8 GND	4 #3 & 1 #8 GND	1 1/2"
B	125 AMP	3 #1 & 1 #6 GND	4 #1 & 1 #6 GND	2"
C	150 AMP	3 #1/0 & 1 #6 GND	4 #1/0 & 1 #6 GND	2"
D	200 AMP	3 #3/0 & 1 #6 GND	4 #3/0 & 1 #6 GND	2 1/2"
E	225 AMP	3 #4/0 & 1 #4 GND	4 #4/0 & 1 #4 GND	2 1/2"
F	250 AMP	3 #250kcmil & 1 #4 GND	4 #250kcmil & 1 #4 GND	3"
G	300 AMP	3 #350kcmil & 1 #4 GND	4 #350kcmil & 1 #4 GND	3 1/2"
H	400 AMP	(2 SETS) @ 3 #3/0 & 1 #3 GND	(2 SETS) @ 4 #3/0 & 1 #3 GND	(2) 2 1/2"
I	500 AMP	(2 SETS) @ 3 #250kcmil & 1 #2 GND	(2 SETS) @ 4 #250kcmil & 1 #2 GND	(2) 3"
J	600 AMP	(2 SETS) @ 3 #350kcmil & 1 #1 GND	(2 SETS) @ 4 #350kcmil & 1 #1 GND	(2) 4"
K	800 AMP	(3 SETS) @ 3 #300kcmil & 1 #1/0 GND	(3 SETS) @ 4 #300kcmil & 1 #1/0 GND	(3) 4"
L	1000 AMP	(3 SETS) @ 3 #400kcmil & 1 #2/0 GND	(3 SETS) @ 4 #400kcmil & 1 #2/0 GND	(3) 4"
M	1200 AMP	(4 SETS) @ 3 #350kcmil & 1 #3/0 GND	(4 SETS) @ 4 #350kcmil & 1 #3/0 GND	(4) 4"
N	1600 AMP	(4 SETS) @ 3 #600kcmil & 1 #4/0 GND	(4 SETS) @ 4 #600kcmil & 1 #4/0 GND	(4) 4"
O	2000 AMP	(5 SETS) @ 3 #600kcmil & 1 #250kcmil GND	(5 SETS) @ 4 #600kcmil & 1 #250kcmil GND	(5) 4"

NOTE:
1. ALL VALUES BASED ON COPPER CONDUCTORS.
2. FEEDERS
   UPGRADE WIRE TO MAINTAIN MAXIMUM OF 2% VOLTAGE DROP.
   BRANCH CIRCUITS
   UPGRADE WIRE TO MAINTAIN MAXIMUM OF 3% VOLTAGE DROP.
3. NUMBER OF WIRES SHALL BE DETERMINED WITH EQUIPMENT ELECTRICAL NAMEPLATE CHARACTERISTICS.
4. WHERE NEUTRALS ARE REQUIRED, IT SHALL MATCH FEEDER CONDUCTOR SIZE.
5. USE CONDUCTOR (THWN/THHN) (3PH, 3W) WITH GROUND PRIMARY FEEDER FOR TRANSFORMERS.

NOTE: REMOVE AND SAVE THE EXISTING 47KW EMERGENCY GENERATOR FROM THE FRONT OF THE WELL EQUIPMENT BUILDING AND COORDINATE WITH OWNER FOR THE LOCATION. REMOVE AND SAVE THE EXISTING ATS FROM THE BOILER ROOM, CONNECTED WITH EMERGENCY GENERATOR. ATS IS CONNECTED WITH EXISTING PANEL IN THE BUNKER AND OTHER PANELS INSIDE BUILDING AND BOILERS CIRCUITING. COORDINATE WITH PROJECT PHASES.

1-LINE RISER DIAGRAM NOTES:

NTS

1. PROVIDE TWO (2) 4" RGS RIGID GALVANIZED STEEL CONDUITS UNDERGROUND FROM EXISTING UTILITY POLE SNET #2008 TO TRANSFORMER PAD FOR ELECTRICAL SERVICE PRIMARY. ENCASE IN CONCRETE WHERE UNDER DRIVES OR PARKING AREAS. CONTRACTOR SHALL PROVIDE PULL LINE IN ALL CONDUITS. PRIMARY CABLE WILL BE FURNISHED & INSTALLED BY CL&P.
2. PROVIDE PRECAST CONCRETE TRANSFORMER PAD AND GROUNDING IN ACCORDANCE WITH CL&P REQUIREMENTS.
3. PROVIDE 208Y/120 VOLT, 1600 AMP SECONDARY ELECTRICAL SERVICE UNDERGROUND FROM TRANSFORMER TO NEW SERVICE SWITCHGEAR. USE (4 SETS) @ 4 #600KCMIL & 1 #4/0 GND, IN 4" CONDUIT. PROVIDE ALSO TWO (2) 4" SPARE CONDUIT. PROVIDE PULL LINE IN ALL CONDUITS.
4. FURNISH & INSTALL 1600 AMP, 208V, 3ø, MAIN CIRCUIT BREAKER WITH 65,000 AIC MINIMUM INTERRUPTING CAPACITY AND GROUND FAULT PROTECTION.
5. FURNISH & INSTALL MAIN DISTRIBUTION PANEL, 208Y/120V, 3ø, 4 WIRE, 1600 A. USE CUTLER-HAMMER SWITCHBOARD FREE-STANDING OR EQUAL. FURNISH WITH BREAKERS SHOWN IN MDP SCHEDULE. PANELBOARD SHALL HAVE MINIMUM 30% SPARE SPACE. SHIPPING OF MDS AND MDP SWITCHBOARDS SHALL BE INDIVIDUAL BY SECTIONS, FOR INSTALLATION PROPOSE. ORDER PANELS SIZES SUCH AS: PULL BOX SHALL BE 30"(WIDTH) X30"(DEPTH)X90"(HEIGHT), AND MDS AND MDP SHALL BE 36"(WIDTH)X30"(DEPTH)X90"(HEIGHT) EA..
6. CONTRACTOR SHALL PROVIDE SERVICE GROUND IN ACCORDANCE WITH NEC ARTICLE 250 & UTILITY REQUIREMENTS. IF MADE ELECTRODE IS USED, INDICATE RESISTANCE READINGS.
7. CURRENT TRANSFORMERS, METER & CONNECTING WIRING SHALL BE FURNISHED & INSTALLED BY CL&P. CONTRACTOR SHALL FURNISH & INSTALL CONDUIT AND CT METER SOCKET IN COMPLIANCE WITH UTILITY SPECIFICATIONS. COORDINATE METER LOCATION WITH OWNER & UTILITY.
8. FURNISH & INSTALL 200KA TRANSIENT VOLTAGE SURGE SUPPRESSOR. USE CUTLER-HAMMER CPS-S3-480Y-SD-RSX OR EQUAL.
9. CONTRACTOR SHALL PROVIDE 4" HIGH POURED CONCRETE PAD. COORDINATE WITH GC FOR DIVISION OF RESPONSIBILITY AND COMPLY WITH CONCRETE SPECIFICATIONS.
10. PROVIDE ONE 4" CONDUIT FOR TELEPHONE, ONE 4" FOR CATV, ONE 4" FOR FIBER, & ONE 4" SPARE FROM PULL BOX TO MAIN EQUIPMENT ROOM.
11. EXISTING 260A 'ATS' TO REMAIN. RECONNECT TO THE NEW EMERGENCY PANEL AND PROVIDE NEW 300 AMP CIRCUIT BREAKER. PROVIDE NEW WIRES AND CONDUITS TO THE NEW GENERATOR AND TO EMERGENCY PANEL.
12. PROVIDE (1) 1 1/2"C, 2#12, (1) 1"C, 12#18, FOR GENERATOR REMOTE ANNUNCIATOR. PROVIDE ALSO (1) 1-1/2" CONDUIT SPARE WITH NYLON PULL STRING. COORDINATE EXACT LOCATIONS IN FIELD WITH OWNER.
13. INSTALL ONE GROUND ROD 10', #8, PER DIV 26 SPECIFICATION SECTION 260526 "GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS."
14. FURNISH & INSTALL 150KW/60HZ GENERAC 'SD150' DIESEL GENERATOR WITH SUB-BASE FUEL TANK OR EQUAL. REFER TO SPECIFICATION 263213 FOR ADDITIONAL REQUIREMENTS. CONCRETE PAD DIMENSIONS 168" X 50", VERIFY DETAILS WITH EMERGENCY GENERATOR VENDOR OR EQUAL. COORDINATE DETAILS WITH CIVIL DRAWINGS.
15. CONTRACTOR SHALL PROVIDE 4" HIGH POURED CONCRETE PAD. COORDINATE WITH GC FOR DIVISION OF RESPONSIBILITY AND COMPLY WITH CONCRETE SPECIFICATIONS. COORDINATE DETAILS WITH ARCHITECTURAL DRAWINGS.
16. FURNISH & INSTALL 600 AMP, 208V, 3ø, MAIN CIRCUIT BREAKER WITH 42,000 AIC MINIMUM INTERRUPTING CAPACITY. USE CUTLER-HAMMER WBMND500 (W/ BREAKER TRIP AT 400AMPS) OR EQUAL. CABINET SHALL HOUSE MAIN SWITCH & CT METERING CABINET.
17. NEW 30 HP FIRE PUMP, 208Y/120V, 3ø. FIRE PUMP CONTROLLER FURNISHED BY MANUFACTURER WITH ATS. PROVIDE ALL REQUIRED WIRING CONNECTIONS.
18. FURNISH AND INSTALL 208Y/120V, 600 AMP, 3ø, 4 WIRE SUB-DISTRIBUTION PANEL IN THE MECHANICAL ROOM B123.
19. FURNISH AND INSTALL 208Y/120V, 3ø, 300 AMP, 4 WIRE DUAL EMERGENCY PANELS IN THE BOILER ROOM A001.
20. EXISTING 208Y/120V, 3ø, 225 AMP, PANEL IN THE 'WELL EQUIPMENT BUILDING' ROOM TO REMAIN. RE-WIRE AND EXTEND EXISTING FEEDER TO THE NEW EMERGENCY PANEL. PROVIDE A NEW E-BOX TO SPLICE THE WIRES. PROVIDE ALSO NEW CIRCUIT BREAKER INTO NEW EMERGENCY PANEL. ONE SPARE CONDUIT.
21. PROVIDE UNDERGROUND (2) TWO 2" CONDUIT AND WIRES (ONE SPARE) FROM 'WELL EQUIPMENT BUILDING' TO MAIN BUILDING FOR TANK LEVEL ALARM WIRING. THE EQUIPMENT BUILDING ANNUNCIATOR ALARM SHALL BE CONNECTED TO FACP. PROVIDE RELAY MODULE TO FACP TO MONITOR A SUPERVISORY CONDITION WHEN TANK LEVEL ALARM IS ACTIVATED. COORDINATE WITH DIV. 21 AND DIV. 22 CONTRACTOR.
22. PROVIDE POWER TO 1.5HP, 208V/3Ø/3P JOCKEY PUMP, FROM EXISTING ROOM PANEL 'WP'.

ONE-LINE DIAGRAM

SCALE: AS NOTED

1 / E301

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ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD COORDINATING THE LOCATION AND ROUTING OR ANY ASSOCIATED COST OF TEMPORARY FEEDERS PER PHASING WHEN NECESSARY.

PHASE 1

ELECTRICAL NOTES:

1. NEW MAIN ELECTRICAL SERVICE SHALL BE INSTALLED IN PHASE 1. PROVIDE TEMPORARY BACKFEED OF EXISTING MAIN SERVICE (ELECTRICAL ROOM) SO THAT EACH BUILDING CAN BE SWAPPED OVER FROM OLD SERVICE TO NEW. FEEDER SIZE: 600AMPS, (2 SETS) @ 4 #350KCMIL & 1 #1 GND.
2. NEW GENERATOR SHALL BE INSTALLED IN PHASE 1. EC MUST PROVIDE TEMPORARY PORTABLE GENERATOR IF THE UNIT CANNOT BE DELIVERED AND INSTALLED PRIOR TO OPENING OF THE ADDITION. EXISTING EMERGENCY GENERATOR, NEAR THE WELL EQUIPMENT, CAN REMAIN ON PHASE 1 TO SERVE THAT EQUIPMENT AND A NEW FEED WILL BE PROVIDED FROM THE NEW GENERATOR TO SERVE THE FIRE PUMP.

Project Title:
Expansion and Renovate as New Project - PHASE 1 of 3
Crystal Lake Elementary School
284 Sandy Beach Road
Ellington, Connecticut 06029

SILVER / PETRUCELLI + ASSOCIATES
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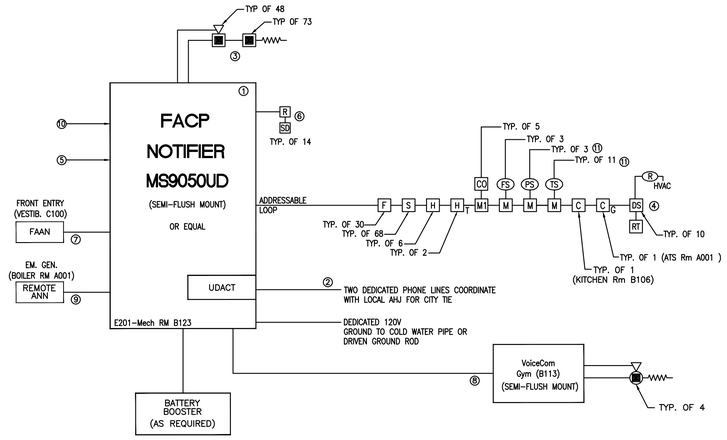
Drawing Title:
One - Line Diagram

State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: AS NOTED
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E301

GENERAL NOTES - ELECTRICAL

1. SPECIFICATION SECTIONS, GENERAL CONDITIONS, SUPPLEMENTAL GENERAL CONDITIONS AND DRAWINGS ARE INTEGRAL PARTS OF CONTRACT DOCUMENTS.
2. SYSTEM COMPONENTS ARE LOCATED APPROXIMATELY ON DRAWINGS. BASE ACTUAL LOCATIONS ON FIELD VERIFICATION OF EXISTING BUILDING CHARACTERISTICS INCLUDING BUT NOT LIMITED TO STRUCTURAL, MECHANICAL, ELECTRICAL & ARCHITECTURAL COMPONENTS.
3. ALL WORK AND ACTION DEPICTED AND DESCRIBED IN CONTRACT DOCUMENTS SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
4. REFERENCE TO SPECIFIC SUB-CONTRACTORS SUCH AS "MECHANICAL", "ELECTRICAL", ETC. ARE INTENDED TO SUGGEST POSSIBLE DIVISION OF RESPONSIBILITY. PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND EXECUTION OF ALL WORK.
5. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
6. ALL EQUIPMENT, MATERIALS AND RELATED SYSTEM COMPONENTS SHALL BE NEW UNLESS NOTED OTHERWISE.
7. REPAIR AND REPLACE AT NO COST TO OWNER ALL EQUIPMENT AND MATERIALS DAMAGED DURING CONSTRUCTION.
8. CIRCUITING DEPICTED FOR RECEPTACLES & LIGHTING FIXTURES DEFINES GROUPING OF FIXTURES, DEVICES AND COMPONENTS AND REQUIRED CONDUCTORS. CIRCUITING IS NOT INTENDED TO DEFINE CONDUIT LOCATIONS.
9. STUDY THE PROJECT MANUAL & DRAWINGS OF OTHER DISCIPLINES INCLUDING ARCHITECTURAL, STRUCTURAL, CIVIL & MECHANICAL.
10. PROVIDE SUPPORT/BRACING OF EQUIPMENT AND BUILDING SERVICES FOR SEISMIC RESTRAINT AS REQUIRED BY CODE.
11. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE APPLICABLE CODES IN THE ORDINANCES AND THE REGULATORY AGENCIES HAVING JURISDICTION.
12. CONTRACTORS SHALL PROVIDE ALL REQUIRED SLEEVES AND SEALS FOR PIPES OR CONDUIT PENETRATING WALLS OR FLOOR SLABS WITH UL LISTED FIRE STOPPING SEALANT WHERE REQUIRED.
13. ELECTRICAL CONDUITS & BOXES SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS WHEREVER POSSIBLE.
14. FURNISH & INSTALL GFCI RECEPTACLES IN ALL WET LOCATIONS, WITHIN 4' TO 6' OFF WATER SOURCE.
15. ALL PENETRATIONS THRU RATED WALLS & CEILINGS SHALL BE SEALED USING U.L. LISTED METHODS APPROPRIATE FOR INDICATED RATING.
16. NO PENETRATIONS ARE ALLOWED INTO STAIR ENCLOSURES EXCEPT AS REQUIRED FOR SERVICES UTILIZED IN THE STAIR.
17. ALL DEVICES WITHIN EXISTING AND NEW RATED WALLS (ON BOTH SIDES) SHALL BE SURFACE MOUNTED, REFER TO CODE PLANS FOR WALL RATING.



FIRE ALARM RISER DIAGRAM
NTS

① REFER TO SPECIFICATION 283111 FOR SYSTEM REQUIREMENTS.

② PANEL WILL BE FURNISHED WITH DIALER FOR FIRE SERVICE NOTIFICATION. PROVIDE TWO PHONE LINES FROM D-MARK.

③ PROVIDE WIRING AS REQUIRED TO ALLOW FOR SILENCING OF AUDIBLE DEVICES WITH STROBES STILL ACTIVE. ALL STROBES SHALL BE SYNCHRONIZED.

④ DUCT SMOKE DETECTOR TYPICAL FOR ONE ON THE SUPPLY SIDE, FOR RTU'S/AHU's > 2000 NOMINAL CFM.

⑤ PROVIDE 120V, 20A DEDICATED BRANCH CIRCUIT WITH BREAKER LOCK, IN PANEL L/7.

⑥ FURNISH AND INSTALL ADDRESSABLE RELAY FOR CLOSURE OF SMOKE DAMPER. DAMPERS ARE BY HVAC CONTRACTOR DIV. 23. PROGRAM TO CLOSE ON ANY ALARM. COORDINATE LOCATION WITH MECHANICAL DRAWINGS.

⑦ FURNISH AND INSTALL NEW FIRE ALARM ANNUNCIATOR PANEL FAAP. PROVIDE ALL WIRES, CONDUITS AND ALL ACCESSORIES.

⑧ FURNISH AND INSTALL NEW EMERGENCY VOICE EVACUATION CONTROL PANEL "VECP" WITH INTEGRAL MICROPHONE, NOTIFIER MODEL "VEC 25/50" OR EQUAL FOR GYM AREA. COORDINATE EXACT LOCATION IN FIELD WITH EQUIPMENT SUPPLIER.

⑨ CONNECT FACP WITH EMERGENCY GENERATOR ALARM REMOTE ANNUNCIATOR, LOCATED IN BASEMENT OLD BOILER ROOM.

⑩ CONNECT FACP TO WELL CONTROL PANEL. REFER TO DRAWING "E301 ONE-LINE DIAGRAM".

⑪ PROVIDE SURGE PROTECTION FOR FIRE ALARM DEVICES IN THE WELL EQUIPMENT BUILDING.

GEN. ALL WIRING TO BE PER SPECIFICATIONS AND MANUFACTURER'S REQUIREMENTS.

GEN. FURNISH DEVICES WITH ALL NECESSARY MATERIALS AND ACCESSORIES FOR COMPLETE INSTALLATION TO BE FULLY OPERATIONAL.

GEN. MOUNT NOTIFICATION DEVICES 80" AFF OR 6" BELOW CEILING, WHICH EVER IS LOWER. MOUNT PULL STATIONS AT 48" AFF.

GEN. REFER TO POWER PLANS TO CONFIRM DEVICE QUANTITIES. COORDINATE WITH DIV 22 AND DIV 23 FOR ANY ADDITIONAL DEVICES NOT DEPICTED IN THIS DIAGRAM.

GEN. FLOW SWITCHES ARE IN 1ST FLOOR POWER PLAN, AREA "A", DWG 'E200' , BASEMENT DRAWING 'E203' AND ONE FS ON RISER TO ATTIC. COORDINATE WITH FIRE PROTECTION PLAN FP105 AND FP301 – (1) ONE PS AND (7) SEVEN TS IN WELL EQUIPMENT BUILDING.

NOTE: MOUNT FA DEVICES ON THE CURTAINWALL ABOVE THE ENTRANCES' HEAD RAILS IF NEED IT. PROVIDE THE WIRES THROUGH MULLIONS TO POWER THE DEVICES.

ALLOW FOR 5 ADDITIONAL SMOKE DETECTORS INSTALLED WITH 50' OF FA CABLE TO BE COORDINATED WITH IN FIELD, FM REQUESTS

FIRE ALARM LEGEND

FACP	EXISTING FIRE ALARM CONTROL PANEL
UDACT	DIGITAL DIALER W/ TWO PHONE LINES
	ADA WALL MOUNT HORN/STROBE
	ADA WALL MOUNT SPEAKER/STROBE
	ADA WALL MOUNT STROBE LIGHT
F	ADDRESSABLE DUAL ACTION PULL STATION W/ KEY RESET
S	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR
H	ADDRESSABLE HEAT DETECTOR
DS	ADDRESSABLE DUCT SMOKE DETECTOR W/ SAMPLING TUBE
RT	REMOTE TEST STATION
M	INTELLIGENT MONITORING MODULE
SD	SMOKE DAMPER
R	FLASHSCAN RELAY DAMPER
H_T	ADDRESSABLE 200° FIX-TEMP & R-O-R DETECTOR
C	ALARM CONTACT IN EXTINGUISHING SYSTEM. SYSTEM FURNISHED & INSTALLED BY DIVISION 21, WIRED BY DIVISION 26 & 28.
C_G	GENERAL ALARM CONDITION. FURNISHED & INSTALLED BY DIVISION 21, WIRED BY DIVISION 26 & 28.
R	INTELLIGENT RELAY
CO	CARBON MONOXIDE DETECTOR
M1	FLASHSCAN MONITOR MODULE
TS	TAMPER SWITCH
PS	PRESSURE SWITCH
FS	FLOW SWITCH
R HVAC	HVAC SHUTDOWN RELAY
-WW-	END OF LINE RESISTOR

PANEL "B" (SECTION B)

RATING: 240V/225A
22,000 A/C
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'A' IT RM A119
MOUNTING: FLUSH

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
RECP - Twist-Lock		25.0	30	2	B	43	50.0			44	B	2	30	25.0		RECP - Twist-Lock
Rm A119		25.0				45		50.0		46				25.0		Rm A119
RECP - A119		5.0	3	1	A	47			10.0	48	A	1	20	5.0		RECP - A119
RECP - A120		5.0	4	1	A	49	5.0			50	A	1	20			SPARE
SPARE			5	1	A	51		0.0		52	A	1	20			SPARE
SPARE			6	1	A	53			0.0	54	A	1	20			SPARE
SPARE			7	1	A	55	0.0			56	A	1	20			SPARE
SPARE			8	1		57		0.0		58		1	20			SPARE
SPARE			9	1		59			0.0	60		1	20			SPARE
SPARE			10	1		61	0.0			62		1	20			SPARE
SPARE			11	1		63		0.0		64		1	20			SPARE
SPARE			12	1		65			0.0	66		1	20			SPARE
SPARE			13	1		67	0.0			68		1	20			SPARE
SPARE			14	1		69		0.0		70		1	20			SPARE
SPARE			15	1		71			0.0	72		1	20			SPARE
SPARE			16	1		73	0.0			74		1	20			SPARE
SPARE			17	1		75		0.0		76		1	20			SPARE
SPARE			18	1		77			0.0	78		1	20			SPARE
SPARE			19	1		79	0.0			80		1	20			SPARE
SPARE			20	1		81		0.0		82		1	20			SPARE
SPARE			20	1		41			0.0	84		1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							55.0	50.0	10.0							
AVG AMPS/PHASE:								38.3								
TOTAL KVA:								13.8 KVA								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MCB.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

FA RISER DIAGRAM
SCALE: AS NOTED

1 / E302

Project Title:
Expansion and Renovate as New Project - PHASE 1 of 3
Crystal Lake Elementary School
284 Sandy Beach Road
Ellington, Connecticut 06029

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FA Riser Diagram

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Date: JUNE 18, 2013
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Drawn By: MS-ELE ENG
Project Number: 12.140

Drawing Number:
E302

PANEL "MDP"

RATING: **240V/1600A**
65,000 AIC
SERVICE: 208Y/120V, 3 PHS/4-W.

LOCATION: Bsmt
BOILER RM **A001**
MOUNTING: Surface

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
						1	60.0			2				60.0		Panel "EM"
Panel "K"			300	3	C	3		60.0		4	C	3	300	60.0		(& WP load) Rm A001
(Rm B106)						5			60.0	6				60.0		& Well Equip Rm
		188.8				7	263.9			8				75.1		
Panel "A"		188.8	225	3	C	9		263.9		10	C	3	225	75.1		Panel "B"
(Rm A103)		188.8				11			263.9	12				75.1		
						13	0.0			14						
				3	C	15		0.0		16						
						17			0.0	18						
						19	0.0			20						
				3	C	21		0.0		22						
						23			0.0	24						
						25	0.0			26						
				3	C	27		0.0		28						
						29			0.0	30						
						31	0.0			32						
				3	C	33		0.0		34						
						35			0.0	36						
						37	447.1			38				447.1		
				3	C	39		447.1		40	C	3	600	447.1		PANEL "SDP"
						41			447.1	42				447.1		600A, Rm B123
TOTAL CONNECTED LOAD PER PHASE:							771.0	771.0	771.0							
AVG AMPS/PHASE:								**771.0**								
TOTAL KVA:							**277.6**	**KVA**								

NOTES:
1. SWITCHBOARD SHALL BE SQUARE D 'I-LINE', CUTLER-HAMMER POW-R-LINE C' OR EQUAL WITH 1600A MAIN LUG.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 1P, 1PH, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 2P, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3P, 3PH, 5 WIRE IN CONDUIT.

PANEL "SDP"

RATING: **240V/600A**
65,000 AIC
SERVICE: 208Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'B'
MECH RM **B123**
MOUNTING: SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
		141.0				1	141.0			2	A		20			SPARE
PANEL "L"		141.0	225	3	C	3		141.0		4	A		20			SPARE
225A, Rm B123		141.0				5			141.0	6	A		20			SPARE
SPARE			20		A	7	200.0			8				200.0		
SPARE			21		A	9		200.0		10	C	3	225	200.0		PANEL "D"
SPARE			22		A	11			200.0	12				200.0		225A, Rm C128
SPARE			20	1	A	13	0.0			14	A	1	20			SPARE
SPARE			20	1	A	15		0.0		16	A	1	20			SPARE
SPARE			20	1	A	17			0.0	18	A	1	20			SPARE
		4.8				19	4.8			20	A	1	20			SPARE
AHU - 11 (1.5HP)		4.8	20	3	C	21		4.8		22	A	1	20			SPARE
(Rooftop) Locker	Supp.	4.8				23			4.8	24	A	1	20			SPARE
		3.2				25	3.2			26	A	1	20			SPARE
AHU - 10 (.75HP)		3.2	20	3	C	27		3.2		28	A	1	20			SPARE
(Clg.) Mus. Rm B112	Supp.	3.2				29			3.2	30	A	1	20			SPARE
		15.7				31	31.4			32				15.7		
AHU - 9 (5HP)		15.7	25	3	C	33		31.4		34	C	3	25	15.7		**AHU - 9** (5HP)
(Rooftop) (GYM)	Supp.	15.7				35			31.4	36				15.7	Exh	(Clg Music Rm B112)
		65.3				37	98.1			38				32.8		
AHU - 6 (8HP)		65.3	90	3	C	39		98.1		40	C	3	50	32.8		**AHU - 8** (3.5HP)
(Rooftop)		65.3				41			98.1	42				32.8		(Rooftop)
TOTAL CONNECTED LOAD PER PHASE:							478.5	478.5	478.5							
AVG AMPS/PHASE:								**478.5**								
TOTAL KVA:							**172.3**	**KVA**								

NOTES:
1. SWITCHBOARD SHALL BE SQUARE D 'I-LINE', CUTLER-HAMMER 'POW-R-LINE C' OR EQUAL WITH 600A MCB.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 1P, 1Ph, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B:208V, 2P, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3P, 3PH, 5 WIRE IN CONDUIT.

PANEL "A" (SECTION A)

RATING: **240V/225A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'A'
COPY RM **A103**
MOUNTING: SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
LTS - A131		6.4	20	1	A	1	12.4			2	A	1	20	6.0		LTS - A126
LTS - A102		7.8	20	1	A	3		14.4		4	A	1	20	6.6		LTS - A103
LTS - A124		8.0	20	1	A	5			14.4	6	A	1	20	6.4		LTS - A114
LTS - B102		9.4	20	1	A	7	15.8			8	A	1	20	6.4		LTS - A131
SPARE			20	1	A	9		0.0		10	A	1	20			SPARE
RECP - A001		7.5	20	1	A	11			12.0	12	A	1	20	4.5		RECP - A001
J-BOX - A102	DW	8.3	20	1	A	13	14.3			14	A	1	20	6.0		RECP - A102
RECP - A102		4.5	20	1	A	15		9.0		16	A	1	20	4.5		RECP - A100
RECP - A100		9.0	20	1	A	17			16.5	18	A	1	20	7.5		RECP - A131
RECP - A131		4.5	20	1	A	19	12.0			20	A	1	20	7.5		RECP - A131
RECP - A130		4.5	20	1	A	21		10.5		22	A	1	20	6.0		RECP - A129
KILN	NEMA	44.2	50	2	B	23			50.2	24	A	1	20	6.0		RECP - A126
(Rm A130)		44.2				25	50.2			26	A	1	20	6.0		RECP - A126
RECP - A128		6.0	20	1	A	27		12.0		28	A	1	20	6.0		RECP - A125
RECP - A124		6.0	20	1	A	29			13.5	30	A	1	20	7.5		RECP - A124
RECP - A114		4.5	20	1	A	31	12.0			32	A	1	20	7.5		RECP - A114
RECP - A114		6.0	20	1	A	33		12.0		34	A	1	20	6.0		RECP - A114
RECP - A106		4.5	20	1	A	35			9.0	36	A	1	20	4.5		RECP - A107
RECP - A103		7.5	20	1	A	37	15.0			38	A	1	20	7.5		RECP - A101
SPARE			20	1	A	39		0.0		40	A	1	20			SPARE
SPARE			20	1	A	41			0.0	42	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							131.7	57.9	115.6							
AVG AMPS/PHASE:								**101.7**								
TOTAL KVA:							**36.6**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MCB.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

PANEL "A" (SECTION B)

RATING: **240V/225A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'A'
COPY RM **A103**
MOUNTING: SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
		46.1				43	78.9			44				32.8		
AHU-2 (16HP)		46.1	70	3	C	45		78.9		46	C	3	50	32.8	SPC	**AHU-5** (3.5HP)
(Rooftop)		46.1				47			78.9	48				32.8		(Rooftop)
AC-1		7.0	20	2	B	49	14.0			50	B	2	20	7.0		AC-2
(Rooftop) Rm A126		7.0				51		14.0		52				7.0		(Rooftop) Rm B131
FCU-1 (AC-1 fan)		15.5	30	2	B	53			22.5	54	B	2	20	7.0		FCU-2 (AC-2 fan)
Rm. A104		15.5				55	22.5			56				7.0		Rm. A127
RECP - Rm A127	DED	1.0	20	1	A	57		10.8		58	A	1	20	9.8	Ded	SEP-1 Recp-Rm A001
AC-3			20	2	B	59			1.0	60	A	1	20	1.0		J-Box SEP1-Cntr A001
(Rooftop) Rm A119						61	5.0			62	A	1	20	5.0		J-Box - ESH1H A124
REF - A102		12.5	20	1	A	63		25.0		64	A	1	20	12.5		J-Box H.Dryer - A108
J-Box H.Dryer - A109		12.5	20	1	A	65			25.0	66	A	1	20	12.5		J-Box H.Dryer - A111
J-Box H.Dryer - A112		12.5	20	1	A	67	25.0			68	A	1	20	12.5		J-Box H.Dryer - A127
SPARE			20	1	A	69		0.0		70	A	1	20			SPARE
SPARE			20	1	A	71			0.0	72	A	1	20			SPARE
SPARE			20	1	A	73	0.0			74	A	1	20			SPARE
SPARE			20	1	A	75		0.0		76	A	1	20			SPARE
SPARE			20	1	A	77			0.0	78	A	1	20			SPARE
SPARE			20	1	A	79	0.0			80	A	1	20			SPARE
SPARE			20	1	A	81		0.0		82	A	1	20			SPARE
SPARE			20	1	A	83			0.0	84		1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							145.4	128.7	127.4							
AVG AMPS/PHASE:								**133.8**								
TOTAL KVA:							**48.2**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MAIN LUG.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

SPC = Single Point of Connection

PANEL "B"

RATING: **240V/225A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'A'
IT RM **A119**
MOUNTING: FLUSH

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
LTS - A123		6.4	20	1	A	1	12.8			2	A	1	20	6.4		LTS - A122
LTS - A121		6.4	20	1	A	3		12.8		4	A	1	20	6.4		LTS - A115
LTS - A115		6.4	20	1	A	5			14.8	6	A	1	20	8.4		LTS - A117
LTS - A113	Corr	12.0	25	1	A	7	17.4			8	A	1	20	5.4		LTS - C131
LTS - C132		8.0	20	1	A	9		16.0		10	A	1	20	8.0		LTS - C130
SPARE			20	1	A	11			0.0	12	A	1	20			SPARE
RECP- A123		3.0	20	1	A	13	10.5			14	A	1	20	7.5		RECP - A123
RECP- A123		6.0	20	1	A	15		9.0		16	A	1	20	3.0		RECP - A122
RECP- A122		7.5	20	1	A	17			13.5	18	A	1	20	6.0		RECP - A122
RECP- A121		3.0	20	1	A	19	10.5			20	A	1	20	7.5		RECP - A121
RECP- A121		6.0	20	1	A	21		12.0		22	A	1	20	6.0		RECP - A115
RECP- A115		7.5	20	1	A	23			13.5	24	A	1	20	6.0		RECP - A115
RECP- A115		4.5	20	1	A	25	12.0			26	A	1	20	7.5		RECP - A115
RECP- A116		6.0	20	1	A	27		10.5		28	A	1	20	4.5		RECP - A116
RECP- A116		7.5	20	1	A	29			13.5	30	A	1	20	6.0		RECP - A117
RECP- A117		4.5	20	1	A	31	12.0			32	A	1	20	7.5		RECP - A117
RECP- A117		4.5	20	1	A	33		9.5		34	A	1	20	5.0		RECP - A119
RECP- A119		5.0	20	1	A	35			11.0	36	A	1	20	6.0		RECP - A118
RECP- A118		6.0	20	1	A	37	12.0			38	A	1	20	6.0		RECP - C146
SPARE			20	1	A	39		0.0		40	A	1	20			SPARE
SPARE			20	1	A	41			0.0	42	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							87.2	69.8	66.3							
AVG AMPS/PHASE:								**74.4**								
TOTAL KVA:							**26.8**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MCB.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

PANEL "D" (SECTION A)

RATING: **240V/225A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'C'
JAN **C128**
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
LTS - C136		4.8	20	1	A	1	9.6			2	A	1	20	4.8		LTS - C108
LTS - C105		4.7	20	1	A	3		9.6		4	A	1	20	4.9		LTS - C110
LTS - C106		3.4	20	1	A	5			11.4	6	A	1	20	8.0		LTS - C134
LTS - C133		8.0	20	1	A	7	16.0			8	A	1	20	8.0		LTS - C130
LTS - C126		7.4	20	1	A	9		13.8		10	A	1	20	6.4		LTS - C125
LTS - C117		8.0	20	1	A	11			15.4	12	A	1	20	7.4		LTS - C122
LTS - C120		9.0	20	1	A	13	18.0			14	A	1	20	9.0	Attic	LTS - C201
LTS - C201	Attic	6.9	20	1	A	15		6.9		16	A	1	20			SPARE
RECP - C132		7.5	20	1	A	17			15.0	18	A	1	20	7.5		RECP - C132
SPARE			20	1	A	19	7.5			20	A	1	20	7.5		RECP - C130
RECP - C130		7.5	20	1	A	21		7.5		22	A	1	20			SPARE
RECP - C131	Corr	7.5	20	1	A	23			15.0	24	A	1	20	7.5		RECP - C133
RECP - C133		7.5	20	1	A	25	15.0			26	A	1	20	7.5		RECP - C129
RECP - C128		7.5	20	1	A	27		7.5		28	A	1	20			SPARE
SPARE			20	1	A	29			7.5	30	A	1	20	7.5		RECP - C134
RECP - C134		7.5	20	1	A	31	16.5			32	A	1	20	9.0		RECP - C136
RECP - C135		7.5	20	1	A	33		15.0		34	A	1	20	7.5		RECP - C135
RECP - C103 Ded	COP	7.5	20	1	A	35			15.0	36	A	1	20	7.5		RECP - C103
RECP - C104		4.5	20	1	A	37	13.5			38	A	1	20	9.0	P Off.	RECP - C105
SPARE			20	1	A	39		0.0		40	A	1	20			SPARE
SPARE			20	1	A	41			0.0	42	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							96.1	60.3	79.3							
AVG AMPS/PHASE:								**78.6**								
TOTAL KVA:							**28.3**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MCB.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

PANEL "D" (SECTION B)

RATING: **240V/225A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'C'
JAN **C128**
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
RECP - C108		6.0	20	1	A	43	13.5			44	A	1	20	7.5		RECP - C111
RECP - C107/111	GFCI	4.5	20	1	A	45		17.0		46	A	1	20	12.5	REF.	RECP - C107- Kitch.
RECP - C110		4.5	20	1	A	47			9.5	48	A	1	20	5.0		RECP - C109 J-Box
RECP - C115		4.0	20	1	A	49	12.5			50	A	1	20	8.5		RECP - C117
RECP - C117		7.5	20	1	A	51		13.5		52	A	1	20	6.0		RECP - C117
RECP - C126		7.5	20	1	A	53			13.5	54	A	1	20	6.0		RECP - C126
RECP - C126		6.0	20	1	A	55	15.0			56	A	1	20	9.0		RECP - C125
RECP - C122		7.5	20	1	A	57		15.5		58	A	1	20	8.0		RECP - C125
RECP - C122		7.5	20	1	A	59			13.5	60	A	1	20	6.0		RECP - C122
RECP - C122		9.0	20	1	A	61	15.0			62	A	1	20	6.0		RECP - C117
RECP - C120		4.5	20	1	A	63		13.5		64	A	1	20	9.0		RECP - C117
RECP - C201	Attic	7.5	20	1	A	65			15.0	66	A	1	20	7.5	Attic	RECP - C201
RECP - C200	Attic	4.5	20	1	A	67	4.5			68	A	1	20			SPARE
SPARE			20	1	A	69		0.0		70	A	1	20			SPARE
EF-1, 2 - C118, 19		8.8	20	1	A	71			17.6	72	A	1	20	8.8		EF-3,4 - C123,24
EF-4A, 4B - C127, 28		8.8	20	1	A	73	17.6			74	A	1	20	8.8		EF-5,6 - C114,15
EF-7 - C113		10.8	20	1	A	75		15.2		76	A	1	20	4.4		EF-9 - C109
		19.2				77			35.9	78				16.7		
AHU - 1 (5.75HP)		19.2	30	3	C	79	35.9			80	C	3	25	16.7		**AHU - 1** (5HP)
(Attic) Supply Fan		19.2				81		35.9		82				16.7		(Attic) Exhaust Fan
SPARE			20	1	A	83			0.0	84	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							114.0	110.6	105.0							
AVG AMPS/PHASE:								**109.9**								
TOTAL KVA:							**39.6**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MAIN LUG.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

PANEL "D" (SECTION C)

RATING: **240V/225A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'C'
JAN. **C128**
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
B-1 Rm C200 Boil	Attic	7.5	20	1	A	85	20.0			86	A	1	20	12.5		J-Box H.Dryer - C109
B-3 Rm C200 Boil	Attic	7.5	20	1	A	87		20.0		88	A	1	20	12.5		J-Box H.Dryer - C112
UH-2 Rm C201 Heater	Attic	7.2	20	1	A	89			19.7	90	A	1	20	12.5		J-Box H.Dryer - C119
		13.1				91	23.7			92				10.6		
AHU - 4 (3.75HP)		13.1	20	3	C	93		23.7		94	C	3	20	10.6		**AHU - 4** (3HP)
(Attic) Supply Fan		13.1				95			23.7	96				10.6		(Attic) Exhaust Fan
		2.4				97	14.9			98	A	1	20	12.5		J-Box H.Dryer - C114
Bleachers - B113	GYM	2.4	20	3	C	99		14.9		100	A	1	20	12.5		J-Box H.Dryer - C115
(Ded line)		2.4				101			14.9	102	A	1	20	12.5		J-Box H.Dryer - C118
BSF-1 Rm C200	Attic	4.4	20	1	A	103	16.9			104	A	1	20	12.5		J-Box H.Dryer - C119
		10.6				105		21.2		106				10.6		
P- 4 (3HP)		10.6	20	3	C	107			21.2	108	C	3	20	10.6		**P- 5** (3HP)
(Attic)		10.6				109	21.2			110				10.6		(Attic)
GWH-1 (Attic C201)		6.2	20	1	A	111		7.2		112	A	1	20	1.0	J-Box	HWRP-1 (Attic C201)
J-Box H.Dryer - C123		12.5	20	1	A	113			25.0	114	A	1	20	12.5		J-Box H.Dryer - C124
P-1 - Rm C201	Attic	4.4	20	1	A	115	8.8			116	A	1	20	4.4		P-2 - Rm C201
P-3 - Rm C202	Attic	4.4	20	1	A	117		31.4		118				27.0		
J-Box H.Dryer - C127		12.5	20	1	A	119			39.5	120	C	3	45	27.0	Roof	**ACU-4**
SPARE			20	1	A	121	27.0			122				27.0		(CONDENSING UNIT)
SPARE			20	1	A	123		0.0		124	A	1	20			SPARE
SPARE			20	1	A	125			0.0	126	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							132.5	118.4	144.0							
AVG AMPS/PHASE:								**131.6**								
TOTAL KVA:							**47.4**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MAIN LUG.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

SPC = Single Point of Connection

PANEL "L" (SECTION A)

RATING: **240V/225A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'B'
MECH RM **B123**
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
LTS - B130		11.2	20	1	A	1	20.9			2	A	1	20	9.7		LTS - B129
LTS - B127		5.9	20	1	A	3		14.1		4	A	1	20	8.2		LTS - B119
LTS - C143		8.3	20	1	A	5			16.9	6	A	1	20	8.6		LTS - C142
FACP - B123		6.0	20	1	A	7	16.8			8	A	1	20	10.8		LTS Gym Contactor
LTS - B110		8.3	20	1	A	9		19.1		10	A	1	20	10.8		LTS Gym Contactor
LTS - C141 MedRead		4.7	20	1	A	11			8.7	12	A	1	20	4.0		LTS Lobby C101
RECP - B131		5.0	20	1	A	13	10.0			14	A	1	20	5.0		RECP - B131
RECP - B131		5.0	20	1	A	15		14.0		16	A	1	20	9.0		RECP - B102
RECP - B102		4.5	20	1	A	17			13.5	18	A	1	20	9.0		RECP - B130
RECP - B130		9.0	20	1	A	19	16.5			20	A	1	20	7.5		RECP - B130
RECP - B130		6.0	20	1	A	21		12.0		22	A	1	20	6.0	FBox	RECP - B130
RECP - B130		6.0	20	1	A	23			12.0	24	A	1	20	6.0	FBox	RECP - B130
RECP - B130		6.0	20	1	A	25	10.5			26	A	1	20	4.5		RECP - Media Kitch
RECP - Media Kitc.		6.0	20	1	A	27		12.0		28	A	1	20	6.0		RECP - Media B129
RECP - Media B129		6.0	20	1	A	29			12.0	30	A	1	20	6.0		RECP - Media B129
RECP - Media B129		7.5	20	1	A	31	13.5			32	A	1	20	6.0	FBox	RECP - Media B129
RECP - Media B129	FBox	6.0	20	1	A	33		15.0		34	A	1	20	9.0		RECP - C141
RECP - C141		4.5	20	1	A	35			12.0	36	A	1	20	7.5		RECP - C140
RECP - C139		6.0	20	1	A	37	12.0			38	A	1	20	6.0		RECP - C137
SPARE			20	1	A	39		0.0		40	A	1	20			SPARE
SPARE			20	1	A	41			0.0	42	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							100.2	86.2	75.1							
AVG AMPS/PHASE:								**87.2**								
TOTAL KVA:							**31.4**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MCB.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

PANEL "L" (SECTION B)

RATING: **240V/225A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'B'
MECH RM **B123**
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
RECP - C137		4.5	20	1	A	43	12.0			44	A	1	20	7.5		RECP - C143
RECP - C144		6.0	20	1	A	45		18.5		46	A	1	20	12.5		J-Box H.Dryer - B120
J-Box H.Dryer - B126		12.5	20	1	A	47			17.5	48	A	1	20	5.0		RECP - B123
RECP - B120		4.0	20	1	A	49	11.5			50	A	1	20	7.5		RECP - B125
RECP - B124		6.0	20	1	A	51		15.0		52	A	1	20	9.0		RECP - B122
RECP - B113	Gym	6.0	20	1	A	53			12.0	54	A	1	20	6.0	Gym	Ded Circ - B113 HOOP
RECP - B113	Gym	6.0	20	1	A	55	12.0			56	A	1	20	6.0	Gym	Ded Circ - B113 HOOP
RECP - B113	Gym	6.0	20	1	A	57		12.0		58	A	1	20	6.0		RECP - B119
RECP - B116		7.5	20	1	A	59			12.0	60	A	1	20	4.5	PCLab	RECP - B130
RECP - B112	Mus	7.5	20	1	A	61	15.0			62	A	1	20	7.5		RECP - B112
RECP - B102		4.5	20	1	A	63		17.0		64	A	1	20	12.5		J-Box H.Dryer - B117
EF-10,11 - B120, 117		8.8	20	1	A	65			17.6	66	A	1	20	8.8		EF-12,13 - B117,115
EF-14,15 - A127, 108		7.0	20	1	A	67	11.4			68	A	1	20	4.4		EF-16 - B126
LTS GYM Contactor		9.9	20	1	A	69		19.8		70	A	1	20	9.9		LTS GYM Contactor
RECP Scoreboard	Ded	1.6	20	1	A	71			26.6	72	B	2	25	25.0		RECEP **Twist-lock**
RECEP **Twist-lock**		25.0	30	2	B	73	50.0			74				25.0		Rm B131
Rm B131		25.0				75		35.0		76	A	1	20	10.0		RECP - B131
RECP - B131		5.0	20	1	A	77			15.0	78	A	1	20	10.0		RECP - B131
RECP - B112		3.0	20	1	A	79	3.0			80	A	1	20			SPARE
SPARE			20	1	A	81		0.0		82	A	1	20			SPARE
SPARE			20	1	A	83			0.0	84	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							114.9	117.3	100.7							
AVG AMPS/PHASE:								**111.0**								
TOTAL KVA:							**39.9**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MAIN LUG.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

PANEL "WP" - Existing Panel

RATING: **240V/225A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: WEB
Well Equip Bldg
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
Exist Load			20	1	A	1	0.0			2	A	1	20			Exist Load
Exist Load			20	1	A	3		0.0		4	A	1	20			Exist Load
Exist Load			20	1	A	5			0.0	6	A	1	20			Exist Load
Exist Load			20	1	A	7	0.0			8	A	1	20			Exist Load
Exist Load			20	1	A	9		0.0		10	A	1	20			Exist Load
Exist Load			20	1	A	11			0.0	12	A	1	20			Exist Load
Exist Load			20	1	A	13	0.0			14	A	1	20			Exist Load
Exist Load			20	1	A	15		0.0		16	A	1	20			Exist Load
Exist Load			20	1	A	17			0.0	18	A	1	20			Exist Load
Exist Load			20	1	A	19	0.0			20	A	1	20			Exist Load
SPARE			20	1	A	21		0.0		22	A	1	20			SPARE
SPARE			20	1	A	23			0.0	24	A	1	20			SPARE
SPARE			20	1	A	25	0.0			26	A	1	20			SPARE
SPARE			20	1	A	27		0.0		28	A	1	20			SPARE
SPARE			20	1	A	29			0.0	30	A	1	20			SPARE
SPARE			20	1	A	31	0.0			32	A	1	20			SPARE
SPARE			20	1	A	33		0.0		34	A	1	20			SPARE
SPARE			20	1	A	35			0.0	36	A	1	20			SPARE
SPARE			20	1	A	37	0.0			38	A	1	20			SPARE
SPARE			20	1	A	39		0.0		40	A	1	20			SPARE
SPARE			20	1	A	41			0.0	42	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							0.0	0.0	0.0							
AVG AMPS/PHASE:								**0.0**								
TOTAL KVA:							**0.0**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MCB.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

PANEL "K" (SECTION A)

RATING: **240V/300A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: 1st Flr 'B'
RM **B106**
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
LTS - B106		8.8	20	1	A	1	18.1			2	A	1	20	9.3		LTS - B105
LTS - B105		5.8	20	1	A	3		15.1		4	A	1	20	9.3		LTS - B105
LTS - B105		3.5	20	1	A	5			3.5	6	A	1	20			LTS
LTS			20	1	A	7	0.0			8	A	1	20			LTS
LTS			20	1	A	9		0.0		10	A	1	20			LTS
RECP - B103	Kitch	7.5	20	1	A	11			13.5	12	A	1	20	6.0	Strg.	RECP - B108
RECP - B106	Kitch	6.0	20	1	A	13	12.0			14	A	1	20	6.0	Kitch	RECP - B106
RECP - B106	Kitch	7.5	20	1	A	15		15.0		16	A	1	20	7.5	Kitch	RECP - B107
RECP - B104	Corr	9.0	20	1	A	17			15.0	18	A	1	20	6.0	Cafet.	RECP - B105
RECP - B108	Cafet.	6.0	20	1	A	19	12.0			20	A	1	20	6.0	Cafet.	RECP - B105
		10.8				21		15.2		22	A	1	20	4.4		CEF-1 . Kitch RmB106
MAU-1 (1.5HP)		10.8	20	3	C	23			20.6	24	A	1	20	9.8		KEF-1 B106
(Kitchen)		10.8				25	24.6			26	A	1	20	13.8		KEF-2 B106
GWH-2 (Kitchen)		6.2	20	1	A	27		6.2		28	A	1	20			SPARE
RECP - TV B105		5.0	20	1	A	29			14.8	30	A	1	20	9.8	Roof	CHF - Kitchen
SPARE			20	1	A	31	0.0			32	A	1	20			SPARE
SPARE			20	1	A	33		0.0		34	A	1	20			SPARE
SPARE			20	1	A	35			0.0	36	A	1	20			SPARE
		10.0				37	10.0			38	A	1	20			SPARE
AHU - 7	SPC	10.0	20	3	C	39		10.0		40	A	1	20			SPARE
(Cafeteria/kitch)	Clg	10.0				41			10.0	42	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							76.7	61.5	77.4							
AVG AMPS/PHASE:								**71.9**								
TOTAL KVA:							**25.9**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 300A MCB.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

SPC = Single Point of Connection

PANEL "K" (SECTION B)

RATING: **240V/300A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4W.

LOCATION: 1st Flr 'B '
RM **B106**
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
		7.5				43	10.7			44				3.2		
Dishwasher (6)		7.5	60	3	C	45		10.7		46	C	3	20	3.2		Waste Collector (7B)
(2HP)		7.5				47			10.7	48				3.2		(3/4 HP)
Walk-In Freezer		5.5	20	1	A	49	18.9			50	B	2	30	13.4	1.2A	Freezer Evaporator coil
Freezer Evaporator coil		14.7	30	2	B	51		28.1		52				13.4	1.2A	(9A)
(9A)		14.7				53			69.7	54	B	2	70	55.0		Freezer
Condensor		15.0	30	2	B	55	70.0			56				55.0		(9B-f) 10HP
(9B-c) 2.5HP		15.0				57		20.4		58	B	2	20	5.4		Air Curtain
Proofer, Hold.Cab. (18)	8.	17.6	30	1	A	59			23.0	60				5.4		(16) 1/2HP
Oven Conv. Gas (19)	8.	6.0	20	1	A	61	12.0			62	A	1	20	6.0	8.	Oven Conv. Gas (19)
Steamer Boil. Gas (23)		15.0	30	1	A	63		30.0		64	A	1	30	15.0		Steamer Boil. Gas (23)
Steamer Boil. Gas (23)		15.0	30	1	A	65			16.5	66	A	1	20	1.5	8.	Tilt Skillet (25A)
Walk - In Cooler (28)		10.0	20	1	A	67	10.6			68	B	2	20	0.6		Walk-In C.. Evap (28A)
		10.0				69		10.6		70				0.6		
Walk-In C. Cond. (28B)		10.0	20	3	C	71			19.8	72	A	1	20	9.8		Drop -In Frost top (34B)
(1 1/4HP)		10.0				73	20.0			74	A	1	20	10.0		Drop -In Hot Wells (34D)
Cash Register (35)		4.0	20	1	A	75		14.0		76	A	1	20	10.0		Milk Cooler (37)
SPARE			20	1	A	77			0.0	78	A	1	20			SPARE
SPARE			20	1	A	79	0.0			80	A	1	20			SPARE
SPARE			20	1	A	81		0.0		82	A	1	20			SPARE
SPARE			20	1	A	83			0.0	84	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							142.2	113.8	139.7							
AVG AMPS/PHASE:								**131.9**								
TOTAL KVA:							**47.5**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 300A MAIN LUG.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.
8. Use NEMA 5-20P - Coordinate in field with Food Service Equipment and Installer.

PANEL "EM" (SECTION A)

RATING: **240V/300A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: Bsmt
BOILER RM **A001**
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
LTS - Out, undercnpy	LCD	5.6	20	1	A	1	12.6			2	A	1	20	7.0	LCD	LTS - Out 'OSF' - NEst
LTS - Courtyard 'OSF'	LCD	4.9	20	1	A	3		11.9		4	A	1	20	7.0	LCD	LTS - Out 'OSF' - SWst
LTS - Out 'OSF'- NW	LCD	4.2	20	1	A	5			7.3	6	A	1	20	3.1		LTS - Corr A113
LTS - Ramp C131		2.8	20	1	A	7	5.6			8	A	1	20	2.8		LTS - Corr C142/ B110
LTS - Out Vest C100	LCD	1.4	20	1	A	9		8.6		10	A	1	20	7.2		LTS Gym B113
EXITS		10.0	20	1	A	11			10.0	12	A	1	20			SPARE
LTS - C141 MedRead		7.0	20	1	A	13	17.0			14	A	1	20	10.0		EXITS
SPARE		6.4	20	1	A	15		6.4		16	A	1	20			SPARE
Rms w/ UL924		6.5	20	1	A	17			13.0	18	A	1	20	6.5		Rms w/ UL924
Rms w/ UL924		6.5	20	1	A	19	13.0			20	A	1	20	6.5		Rms w/ UL924
Rms w/ UL924		6.5	20	1	A	21		13.0		22	A	1	20	6.5		Rms w/ UL924
SPARE			20	1	A	23			0.0	24	A	1	20			SPARE
SPARE			20	1	A	25	0.0			26	A	1	20			SPARE
SPARE			20	1	A	27		0.0		28	A	1	20			SPARE
SPARE			20	1	A	29			0.0	30	A	1	20			SPARE
SPARE			20	1	A	31	0.0			32	A	1	20			SPARE
SPARE			20	1	A	33		0.0		34	A	1	20			SPARE
SPARE			20	1	A	35			0.0	36	A	1	20			SPARE
SPARE			20	1	A	37	0.0			38	A	1	20			SPARE
SPARE			20	1	A	39		0.0		40	A	1	20			SPARE
SPARE			20	1	A	41			0.0	42	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							48.2	39.9	30.3							
AVG AMPS/PHASE:								**39.5**								
TOTAL KVA:							**14.2**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 225A MCB.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

PANEL "EM" (SECTION B)

RATING: **240V/300A**
22,000 AIC
SERVICE: 208 Y/120V, 3 PHS/4-W.

LOCATION: Bsmt
BOILER RM **A001**
MOUNTING:SURFACE

DESCRIPTION	NOTE	AMPS	TRIP AMP	POLE	CKT. TYP	CKT. NO.	A	B	C	CKT. NO.	CKT. TYP	POLE	TRIP AMP	AMPS	NOTE	DESCRIPTION
LTS			20	1	A	43	0.0			44	A	1	20			LTS
LTS			20	1	A	45		0.0		46	A	1	20			LTS
LTS			20	1	A	47			0.0	48	A	1	20			LTS
LTS			20	1	A	49	0.0			50	A	1	20			LTS
LTS			20	1	A	51		0.0		52	A	1	20			LTS
RECP -			20	1	A	53			0.0	54	A	1	20			RECP -
RECP -			20	1	A	55	0.0			56	A	1	20			RECP -
RECP -			20	1	A	57		0.0		58	A	1	20			RECP -
RECP -			20	1	A	59			0.0	60	A	1	20			RECP -
RECP -			20	1	A	61	0.0			62	A	1	20			RECP -
RECP -			20	1	A	63		0.0		64	A	1	20			RECP -
SPARE			20	1	A	65			0.0	66	A	1	20			SPARE
SPARE			20	1	A	67	0.0			68	A	1	20			SPARE
SPARE			20	1	A	69		0.0		70	A	1	20			SPARE
SPARE			20	1	A	71			0.0	72	A	1	20			SPARE
SPARE			20	1	A	73	0.0			74	A	1	20			SPARE
SPARE			20	1	A	75		0.0		76	A	1	20			SPARE
SPARE			20	1	A	77			0.0	78	A	1	20			SPARE
SPARE			20	1	A	79	0.0			80	A	1	20			SPARE
SPARE			20	1	A	81		0.0		82	A	1	20			SPARE
SPARE			20	1	A	83			0.0	84	A	1	20			SPARE
TOTAL CONNECTED LOAD PER PHASE:							0.0	0.0	0.0							
AVG AMPS/PHASE:								**0.0**								
TOTAL KVA:							**0.0**	**KVA**								

NOTES:
1. PANELBOARD SHALL BE CUTLER-HAMMER 'POW-R-LINE 1a' OR EQUAL WITH 300A MAIN LUG.
2. PROVIDE CB LOCK.
3. PROVIDE SHUNT TRIP BREAKER.
4. UPGRADE WIRE SIZE AS REQUIRED TO MAINTAIN 3% MAXIMUM VOLTAGE DROP.
5. CIRCUIT TYPE A: 120V, 3 WIRE IN CONDUIT OR MC CABLE.
6. CIRCUIT TYPE B: 208V, 1PH, 4 WIRE IN CONDUIT OR MC CABLE.
7. CIRCUIT TYPE C: 208V, 3PH, 5 WIRE IN CONDUIT.

PANEL SCHEDULES 1 / E303
SCALE: AS NOTED

EQUIPMENT SCHEDULE (X/1)

Serves Area/Rm:	Location
OT/PT Rm A126	ROOFTOP
Main Equip Rm B131	ROOFTOP
TELE/DATA Rm A119	ROOFTOP
CLASSRMS ADD WING C	ATTIC
EXIST CLASSRMS WING B	ROOFTOP
ADMIN AREA ADDITION	ATTIC
STAFF Rm/RES. STAFF LOUNGE	ROOFTOP
MEDIA CNTR. Rm B129	ROOFTOP
KITC./CAFE Rm B105	ROOFTOP
COMP. LAB Rm B130	ROOFTOP
GYMNASIUM B113	CEILING
MUSIC Rm B112	CEILING
LOCKER AREA	ROOFTOP
(Exhaust)	ATTIC
(Exhaust)	ATTIC
(Exhaust)	CEILING
MECH Rm C200	ATTIC
MECH Rm C200	ATTIC
MECH Rm C200	ATTIC
MECH Rm C200	ATTIC
Kitchen Rm B106	Kitchen
Rm B110, C116, A113, C131, C146 & C101	1st Floor
KINDERG. TLT C118	IN-LINE
KINDERG. TLT C119	IN-LINE
TLT C123	IN-LINE
TLT C124	IN-LINE
TLT C127	IN-LINE
TLT C128	IN-LINE
STAFF TLT C114	IN-LINE
STAFF TLT C115	IN-LINE
BOYS TLT C113	IN-LINE
NURSE TLT C109	IN-LINE
GIRLS TLT B120	ROOF
BOYS TLT B117	ROOF
GIRL LOC. B 121	ROOF
BOYS LOCKER B115	ROOF
TLT B109	ROOF
KITCHEN STORAGE B140	CEILING

SYMBOL	VOLTAGE	PHASE	CIRCUIT AMPS	BREAKER	PANEL CIRCUIT	HP/FLA	CONNECTION
AC-1/ ACU-1	208	1	20	20A/2P	A-49,51	7A	PROVIDE NEMA-3R N-F DISCONNECT ③
AC-2/ ACU-2	208	1	20	20A/2P	A-50,52	7A	PROVIDE NEMA-3R N-F DISCONNECT ③
AC-3/ ACU-3	208	1	20	20A/2P	A-59,61	7A	PROVIDE NEMA-3R N-F DISCONNECT ③
AHU-1	208	3	30	30A/3P	D-77,79,81	5.75HP/19.2	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-2	208	3	70	70A/3P	A-43,45,47	16HP/46.1A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-4	208	3	20	20A/3P	D-78,80,82	3.5HP/13.1A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-5	208	3	50	50A/3P	A-44,46,48	32.8A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-6	208	3	90	90A/3P	SDP-37,39,41	65.3A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-7 *	208	3	20	20A/3P	K-37,39,41	10A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-8	208	3	50	50A/3P	SDP-38,40,42	32.8A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-9	208	3	25	25A/3P	SDP-31,33,35	15.7A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-10	208	3	20	20A/3P	SDP-25,27,29	3.2A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-11	208	3	20	20A/3P	SDP-19.21.23	4.8A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT ④
AHU-1	208	3	25	25A/3P	D-78,80,82	5HP/16.7	HARDWIRE TO DISC. & VFD FURN. WITH UNIT
AHU-4	208	3	20	20A/3P	D-92,94,96	3HP/10.6A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT
AHU-9	208	3	25	25A/3P	SDP-32,34,36	15.7A	HARDWIRE TO DISC. & VFD FURN. WITH UNIT
B-1	120	1	20	20A/1P	D-85	7.5A	PROVIDE NEMA-1 N-F DISCONNECT
B-2	120	1	20	20A/1P	D-86	7.5A	PROVIDE NEMA-1 N-F DISCONNECT
B-3	120	1	20	20A/1P	D-87	7.5A	PROVIDE NEMA-1 N-F DISCONNECT
BSF-1	120	1	20	20A/1P	D-103	4.4A	PROVIDE NEMA-1 N-F DISCONNECT
CEF-1	120	1	20	20A/1P	K-22	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT ⑥
CUH-1	120	1	20	20A/1P	RECP AREA	3.2A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-1	120	1	20	20A/1P	D-71	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-2	120	1	20	20A/1P	D-71	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-3	120	1	20	20A/1P	D-72	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-4	120	1	20	20A/1P	D-72	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-4A	120	1	20	20A/1P	D-73	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-4B	120	1	20	20A/1P	D-73	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-5	120	1	20	20A/1P	D-74	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-6	120	1	20	20A/1P	D-74	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-7	120	1	20	20A/1P	D-75	1/4HP/5.8A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-9	120	1	20	20A/1P	D-76	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-10	120	1	20	20A/1P	L-65	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-11	120	1	20	20A/1P	L-65	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-12	120	1	20	20A/1P	L-66	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-13	120	1	20	20A/1P	L-66	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-14	120	1	20	20A/1P	L-66	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT ⑨
EF-15	120	1	20	20A/1P	L-66	1/15HP/2A	HARDWIRE TO DISC. FURN. WITH UNIT ⑧

EQUIPMENT SCHEDULE CONT. (X/1)

Serves Area/Rm:	Location
TLT B126 & JAN CLOSET B127	ROOF
JAN CLT A107, TLT A108, A111	ROOF
GIRLS TOILET A112, BOYS TLT A109	ROOF
GIRLS TOILET A112, BOYS TLT A109	ROOF
ART STORAGE	ROOF
KILN HOOD-A130	ROOF
SCIENCE STORAGE A125	ROOF
WELL EQUIPMENT BUILDING-EXH. FAN	IN-LINE
Kitchen B106	ROOF
Kitchen B106	ROOF
MECH. Rm C200	ATTIC
MECH. Rm C200	ATTIC
MECH. Rm C200	ATTIC
MECH. Rm C200	ATTIC
MECH. Rm C200	ATTIC
Corr. B101	ROOF
ELECTRICAL/MECH. RM A001	BSMT.
Rm B114,B123,B127, B122,C144	1st Floor
MECH Rm C200	ATTIC
MECH Rm C201	ATTIC
MECH Rm C201	ATTIC
KITCHEN Rm B106	KITCHEN
MECH Rm C201	ATTIC
ADMIN AREA ADDITION	ROOF
CONDENSATE HOOD FAN-KITCHEN	ROOF

SYMBOL	VOLTAGE	PHASE	CIRCUIT AMPS	BREAKER	PANEL CIRCUIT	HP/FLA/ MCA	CONNECTION
EF-16	120	1	20	20A/1P	RECP AREA	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-17	120	1	20	20A/1P	RECP AREA	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT ⑨
EF-18	120	1	20	20A/1P	RECP AREA	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-19	120	1	20	20A/1P	RECP AREA	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-20	120	1	20	20A/1P	RECP AREA	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-21	120	1	20	20A/1P	RECP AREA	1/20HP/1.6A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-22	120	1	20	20A/1P	RECP AREA	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
EF-23	120	1	20	20A/1P	'WP' LOCAL PNL	1HP/16A	HARDWIRE TO DISC. FURN. WITH UNIT ⑤
KEF-1	120	1	20	20A/1P	K-24	1/2HP/9.8A	HARDWIRE TO DISC. FURN. WITH UNIT
KEF-2	120	1	20	20A/1P	K-26	3/4HP/13.8A	HARDWIRE TO DISC. FURN. WITH UNIT ⑤
P-1	120	1	20	20A/1P	D-A115	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
P-2	120	1	20	20A/1P	D-A116	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
P-3	120	1	20	20A/1P	D-A117	1/6HP/4.4A	HARDWIRE TO DISC. FURN. WITH UNIT
P-4	208	3	20	20A/3P	D-105,107,109	3HP/10.6A	PROVIDE NON-FUSED DISCONNECT NEMA-1 ⑦
P-5	208	3	20	20A/3P	D-106,108,110	3HP/10.6A	PROVIDE NON-FUSED DISCONNECT NEMA-1 ⑦
MAU-1	208	3	20	20A/3P	K-21,23,25	10.8A	HARDWIRE TO DISC. FURN. WITH UNIT ④⑤
SEP-1	120	1	20	20A/1P	A-58	1/2HP/9.8A	PROVIDE NEMA-1 N-F DISCONNECT
UH-1	120	1	20	20A/1P	RECP AREA	1/8HP/3.5A	PROVIDE NEMA-1 N-F DISCONNECT
UH-2	120	1	20	20A/1P	D-89	1/3HP/7.2A	HARDWIRE TO DISC. FURN. WITH UNIT
UH-2	120	1	20	20A/1P	D-90	1/3HP/7.2A	HARDWIRE TO DISC. FURN. WITH UNIT
GWH-1	120	1	20	20A/1P	D-111	6.2A	HARDWIRE TO DISC. FURN. WITH UNIT
GWH-2	120	1	20	20A/1P	K-27	6.2A	HARDWIRE TO DISC. FURN. WITH UNIT
HWPR-1	120	1	20	20A/1P	D-112	92W	PROVIDE J-BOX
ACU-4 (AHU-4)	208	3	45	45A/3P	D-118,120,122	27A	PROVIDE NEMA-3R N-F DISCONNECT
CHF	120	1	20	20A/1P	K-30	1/2HP 9.8A	PROVIDE NEMA-3R N-F DISCONNECT ⑩

NOTES:

1. DISCONNECT SWITCHES & MOTOR STARTERS LISTED SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS NOTED OTHERWISE.
2. PROVIDE ANY 120V WIRING REQUIRED TO INTERLOCK EQUIPMENT WITH HVAC CONTROLS.

③ THE BRANCH CIRCUIT TO BE WIRED TO EACH UNIT CONDENSER AND FAN COIL IS FED WITH 4 WIRES FROM THE CONDENSER, PER MANUFACTURER RECOMMENDATION. COORDINATE WITH MECHANICAL DRAWINGS DIV.23.

④ PROVIDE POWER 120V/1P AND WIRING REQUIRED FOR GFCI RECEPTACLES BY THE AHU's UNITS AS SHOWN IN POWER PLANS.

⑤ INTERCONNECTING WIRE FROM INTERNAL CONTROL CENTER TO KITCHEN EXHAUST FANS KEF-1, KEF-2, CEF-1 SHALL BE BY ELECTRICAL CONTRACTOR. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR DIV. 23.

⑥ PROVIDE WALL SWITCH. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR DIV. 23.

⑦ VFD PROVIDED BY DIV. 23.

⑧ INTERLOCK WITH HOOD CIRCUITS BY DIV. 26.

⑨ INTERLOCK WITH OCCUPANCY SENSORS BY DIV. 26.

⑩ COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR DIV. 23.

ALTERNATE 'AHU-7' IMPORTANT NOTE:

* AHU-7 ALTERNATE, PROVIDED BY DIV. 23, MCQUAY MANUFACTURER HAS 2 POINT OF CONNECTION FOR SUPPLY (5HP) AND EXHAUST FAN (5HP) PER MECHANICAL SCHEDULE DRAWING M401. EC SHALL PROVIDE , BASED ON MANUFACTURER REQUIREMENTS IN THE SCHEDULE, 125A/3P CIRCUIT BREAKER AND ASSOCIATE WIRES AND CONDUIT FOR PROVIDING 208V/3Ø VOLTAGE TO THE UNIT FROM THE KITCHEN PANEL 'K'.

EQUIPMENT SCHEDULE (1/E304)
SCALE: AS NOTED

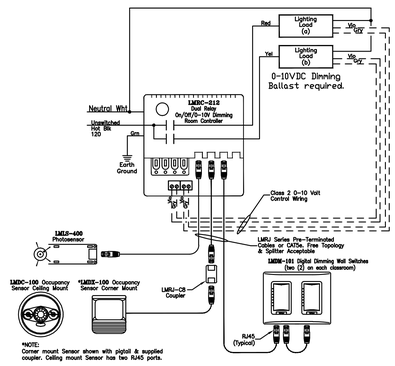
Project Title:
Expansion and Renovate as New Project - PHASE 1 of 3
Crystal Lake Elementary School
284 Sandy Beach Road
Ellington, Connecticut 06029

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06518-2340
Tel. 203 230 9007 Fax. 203 230 8247
silverpetrucelli.com

Revision:	Description:	Date:	Revised By:
--	ISSUED FOR BIDDING	NOV. 26, 2013	--

Drawing Title:
EQUIPMENT SCHEDULE
State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: AS NOTED
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E304



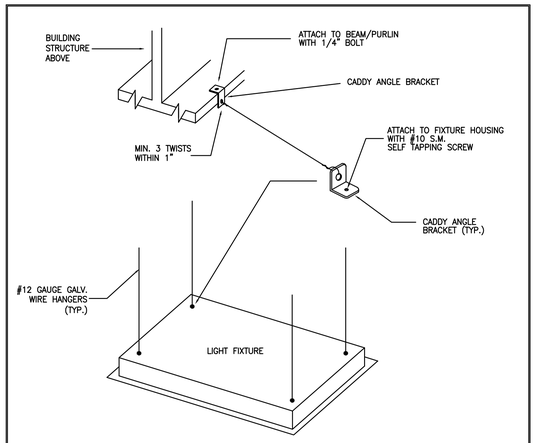
DEVICES ARE PRESET FOR PLUG N' GO OPERATION, ADJUSTMENT IS OPTIONAL.

SEQUENCE OF OPERATION: IN THIS CONFIGURATION THE LMRC-212 DEFAULTS TO MULTI-LEVEL AUTOMATIC-ON/AUTOMATIC-OFF OPERATION. LOAD (A) ON THE LMRC-212 TURNS ON AUTOMATICALLY, WHILE LOAD (B) DEFAULTS TO MANUAL-ON CONTROL; ALL RELAYS TURN OFF AUTOMATICALLY. ENHANCED ROOM CONTROLLERS SUPPORT UP TO 64 LOADS AND 48 DEVICES PER DLM LOCAL NETWORK. AT SYSTEM STARTUP, DEFAULT DIMMING PARAMETERS ARE ESTABLISHED INCLUDING: LEVELS FOR PRESETS 1-4; FADE TIMES; AND FADE AND RAMP RATES. DIMMING AND SYSTEM PARAMETERS MAY BE CUSTOMIZED. ADJUST TIME DELAY NO LESS THAN 15 MINUTES. FOR FULL OPERATIONAL DETAILS, ADJUSTMENTS AND MORE FEATURES OF THE PRODUCT, SEE THE DLM SYSTEM INSTALLATION GUIDE AT WWW.WATTSTOPPER.COM
PROVIDE LMCT-100 DIGITAL WIRELESS CONFIGURATION TOOL TO OWNER. USE CATEGORY 5E PLENUM-RATED CABLE.

TYPICAL CLASSROOM WIRING DIAGRAM

NTS

(IF DIMMING CLASSROOMS LIGHTING)

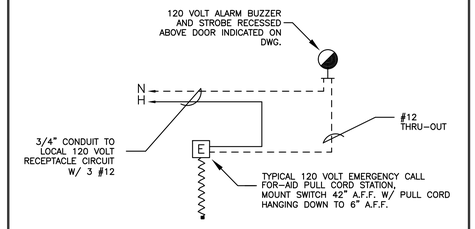


TYPICAL LAY-IN GRID LIGHTING FIXTURE SUPPORT/MOUNTING DETAIL

NTS

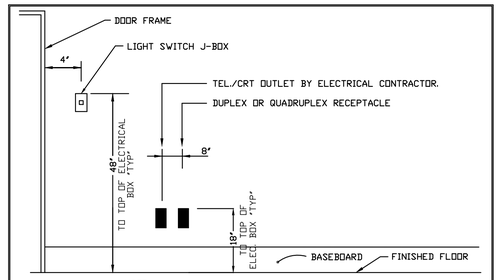
NOTES:

1. ALL LIGHTING FIXTURES SHALL BE SECURED TO THE STRUCTURE BY THE ELECTRICAL CONTRACTOR.
2. FLUSH OR RECESSED LIGHT FIXTURES LESS THAN 56 POUNDS SHALL HAVE 2 – 12 GA. SLACK SAFETY WIRES FROM DIAGONAL CORNERS TO BUILDING STRUCTURE BY TRADE CONTRACTOR.
3. FLUSH OR RECESSED LIGHT FIXTURES MORE THAN 56 POUNDS SHALL HAVE 4 – 12 GA. SLACK SAFETY WIRES FROM DIAGONAL CORNERS TO BUILDING STRUCTURE BY TRADE CONTRACTOR.
4. SECURE SURFACE MOUNTED LIGHT FIXTURES W/ MINIMUM OF 2 – POSITIVE CLAMPING DEVICES OF 14 GA. MINIMUM STEEL AND W/ 12 GA. WIRE TO BUILDING STRUCTURE.



HANDICAPPED CALL-FOR-AID SYSTEM

NTS

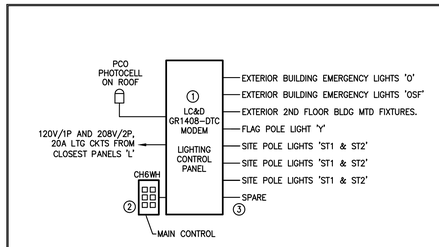


NOTE:
THE LOCATION OF WALL OUTLETS IS DIRECTLY RELATED TO THE FURNITURE LOCATION. SPECIAL ATTENTION SHALL BE GIVEN TO LOCATING OUTLETS PER THIS DETAIL. DO NOT INSTALL OUTLETS BACK TO BACK.

OUTLET MOUNTING DETAIL

NTS

(TYP. ALL OUTLETS UNLESS OTHERWISE NOTED.)



LIGHTING CONTROL DIAGRAM NOTES

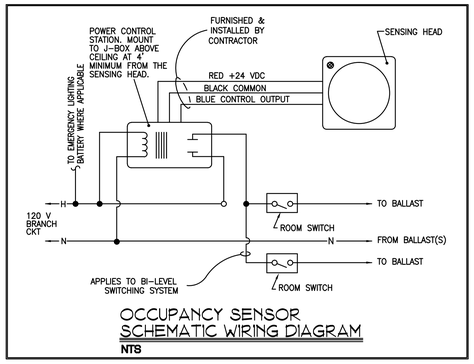
NTS

1. INSTALL NEW MAIN LIGHTING CONTROL PANEL IN BOILER ROOM. FURNISH WITH DTC MODEM OPTION, HINGED DOOR AND SURFACE PANEL. PROVIDE TELEPHONE LINE TO TELEPHONE BOARD FOR MODEM OPERATION.
2. PROVIDE PROGRAMMABLE MULTI-BUTTON SWITCHES FOR MANUAL CONTROL OF LIGHTING. SWITCH LOCATIONS SHALL BE COORDINATED IN FIELD.
3. PROVIDE PROGRAMMABLE RELAY AND INDEPENDENT CIRCUIT WIRING FOR EACH LIGHTING LOAD SHOWN. NOTE THAT AREAS WITH EMERGENCY LIGHTING WILL REQUIRE UNSWITCHED POWER AS WELL.

MOUNTING HEIGHTS

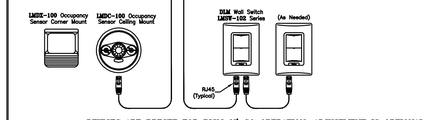
(UNLESS OTHERWISE NOTED)

RECEPTACLE	18" AFF TO TOP OF THE BOX 'TYP'
LIGHT SWITCHES	48" AFF TO TOP OF THE BOX 'TYP'
EM Stop SWITCHES	48" AFF TO TOP OF THE BOX 'TYP'
CLOCK OUTLETS	7'-6" AFF 'TYP'
FA STROBES	7'-6" AFF 'TYP'
PULL STATION	48" AFF TO TOP OF THE BOX 'TYP'
EPO	48" AFF TO TOP OF THE BOX 'TYP'
PANELBOARDS	6'-7' MAXIMUM HEIGHT TO THE CENTER OF THE GRIP OF THE OPERATING HANDLE OF THE SWITCH OR C/B, IN ITS HIGHEST POSITION, AFF, PER NEC 2005 '240.24 (A)', 'TYP'



OCCUPANCY SENSOR SCHEMATIC WIRING DIAGRAM

NTS



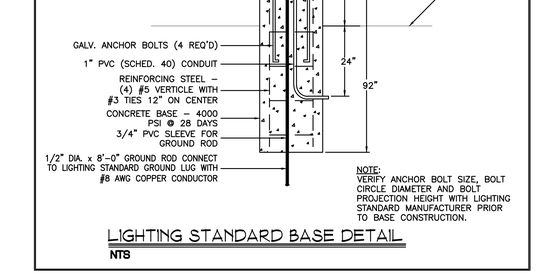
DEVICES ARE PRESET FOR PLUG N' GO OPERATION, ADJUSTMENT IS OPTIONAL.

SEQUENCE OF OPERATION: IN THIS CONFIGURATION THE LMRC-102 DEFAULTS TO MULTI-LEVEL AUTOMATIC-ON/AUTOMATIC OFF. LOAD (A) TURNS ON AUTOMATICALLY AND LOAD (B) DEFAULTS TO MANUAL-ON CONTROL; BOTH LOADS TURN AUTOMATICALLY OFF. MAXIMUM OF 4 ROOM CONTROLLERS, CONTROLLING UP TO 8 LOADS AND UP TO 24 COMMUNICATING DEVICES PER DLM LOCAL NETWORK. ADJUST TIME DELAY OFF TO MINIMUM 20 MIN. THE FOR FULL OPERATIONAL DETAILS, ADJUSTMENTS AND MORE FEATURES OF THE PRODUCT, SEE THE DLM SYSTEM INSTALLATION GUIDE AT WWW.WATTSTOPPER.COM

LMRC-102 DUAL RELAY WIRING DIAGRAM

NTS

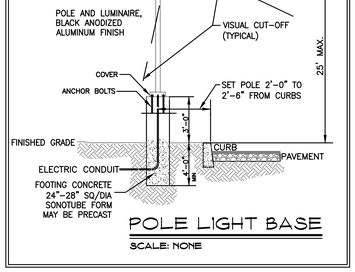
(ALTERNATE: NO DIMMING CLASSROOMS LIGHTING, BUT WITH PHOTOSENSOR TO TURN ON/OFF THE ROW OF LIGHTS)



NOTE:
VERIFY ANCHOR BOLT SIZE, BOLT CIRCLE DIAMETER AND BOLT PROJECTION HEIGHT WITH LIGHTING STANDARD MANUFACTURER PRIOR TO BASE CONSTRUCTION.

LIGHTING STANDARD BASE DETAIL

NTS



POLE LIGHT BASE

SCALE: NONE

OCCUPANCY SENSORS DETAILS

WALL MOUNTED USE:
WATTSTOPPER 'DW-100', DUAL TECHNOLOGY: (ULTRASONIC AND PIR) OR EQUAL.

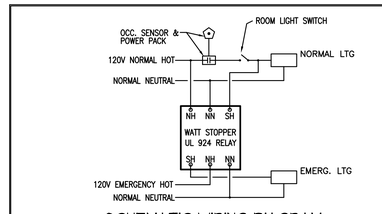
CEILING MOUNTED USE:
WATTSTOPPER 'LMUC-100' W/'LRMC100 SERIES ROOM CONTROLLER' (IN BATHROOMS) OR EQUAL.
WATTSTOPPER 'LMDC-300' W/'LRMC100 SERIES ROOM CONTROLLER' (DUAL TECHNOLOGY) (IN CONFERENCE ROOMS, LUNCH ROOMS, ART, OFFICES) OR EQUAL.

CORNER MOUNTED ON CEILING:
WATTSTOPPER 'LMDX-100' W/'LMRC212 ROOM CONTROLLER' (IN CLASSROOMS AND COMPUTER CLASSROOMS) OR EQUAL. TIME DELAY NO LESS THAN 15 MINUTES AND SET 30 MINUTES IN COMPUTER CLASSROOMS.

GYM DLM SENSORS:
WATTSTOPPER 'LMPC-100-5' EXTENDED HEIGHT PIR SENSOR AND KEYPAD TYPE 'LMSW-100' OR EQUAL. MOUNT SENSOR AT LEAST 6' AWAY FROM AIR SUPPLY AND AVOID OBSTACLES THAT BLOCK SENSOR'S LINE-OF-SIGHT (20' MOUNTING HEIGHT). USE LMRC-102 CONTROLLER.

NOTES:

1. MANUFACTURER TO PROVIDE A SENSOR LAYOUT SUBMITTAL DURING THE SUBMITTAL PROCESS.
2. THE OCCUPANCY SENSORS SHOULD BE SET UP AS VACANCY SENSORS (MANUAL ON/AUTO OFF) PER ASHRAE 2010 REQUIRING. FINAL TEST SHOULD BE PERFORMED WITH OWNER IN FIELD.

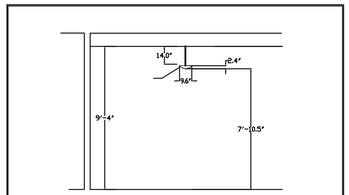


SCHEMATIC WIRING DIAGRAM - EMERGENCY LIGHTING RELAY

SCALE: NONE

NOTES:

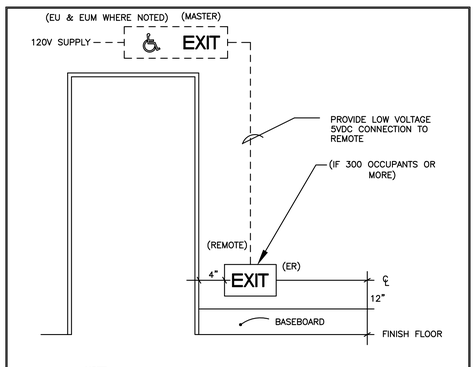
1. INTENT IS THAT FIXTURE BALLASTS TIED TO THE EMERGENCY LIGHTING CIRCUIT WILL REMAIN ENERGIZED UPON LOSS OF NORMAL POWER REGARDLESS OF SWITCH POSITION.



PENDANT FIXTURE CLASSROOM

NTS

INCLUDE IN THE BASE BID THE PROVISION OF J-HOOK SUPPORTS FOR EXISTING FIBER OPTIC, DATA AND COMMUNICATION CABLING THAT EXISTS UNSUPPORTED ABOVE CEILINGS WHICH ARE BEING REMOVED. THE WORK WILL INCLUDE THE PROVISION OF UP TO 2 ROWS OF J HOOKS LOCATED EVERY 5 FEET THROUGHOUT ALL CORRIDORS, IF NEED IT. ALL LOOSE CABLING ABOVE THE CEILING WILL BE BUNDLED (AS MUCH AS LENGTHS PERMIT) AND ATTACHED TO STRATEGICALLY PLACED J HOOKS TO FACILITATE THE SUSPENSION OF THE EXISTING CABLES OFF OF THE CEILING GRID.



NOTE:
2003 INTERNATIONAL BUILDING CODE, CT. SUPPLEMENT 2005 – 1011.1.1

FLOOR PROXIMITY EXIT SIGN DETAIL

NTS

CATV SYSTEM:

(TV) CATV

CONTRACTOR SHALL PROVIDE 4" J-BOX WITH JACKS AND 3/4"C TO ACCESSIBLE CEILING SPACE AT EACH DROP LOCATION. PROVIDE COAX CABLE RG6 WITH CONNECTORS AT EACH END. ALL HOMERUNS SHALL GO TO CENTRAL LOCATION. COORDINATE WITH OWNER FOR EXACT LOCATION.

DETAILS

SCALE: AS NOTED

1 / E305

Project Title:

Expansion and Renovate as New Project - PHASE 1 of 3

Crystal Lake Elementary School

284 Sandy Beach Road
Ellington, Connecticut 06029

SILVER / PETRUCELLI + ASSOCIATES
Architects / Engineers / Interior Designers
3190 Whitney Avenue, Hamden, CT 06518-2340
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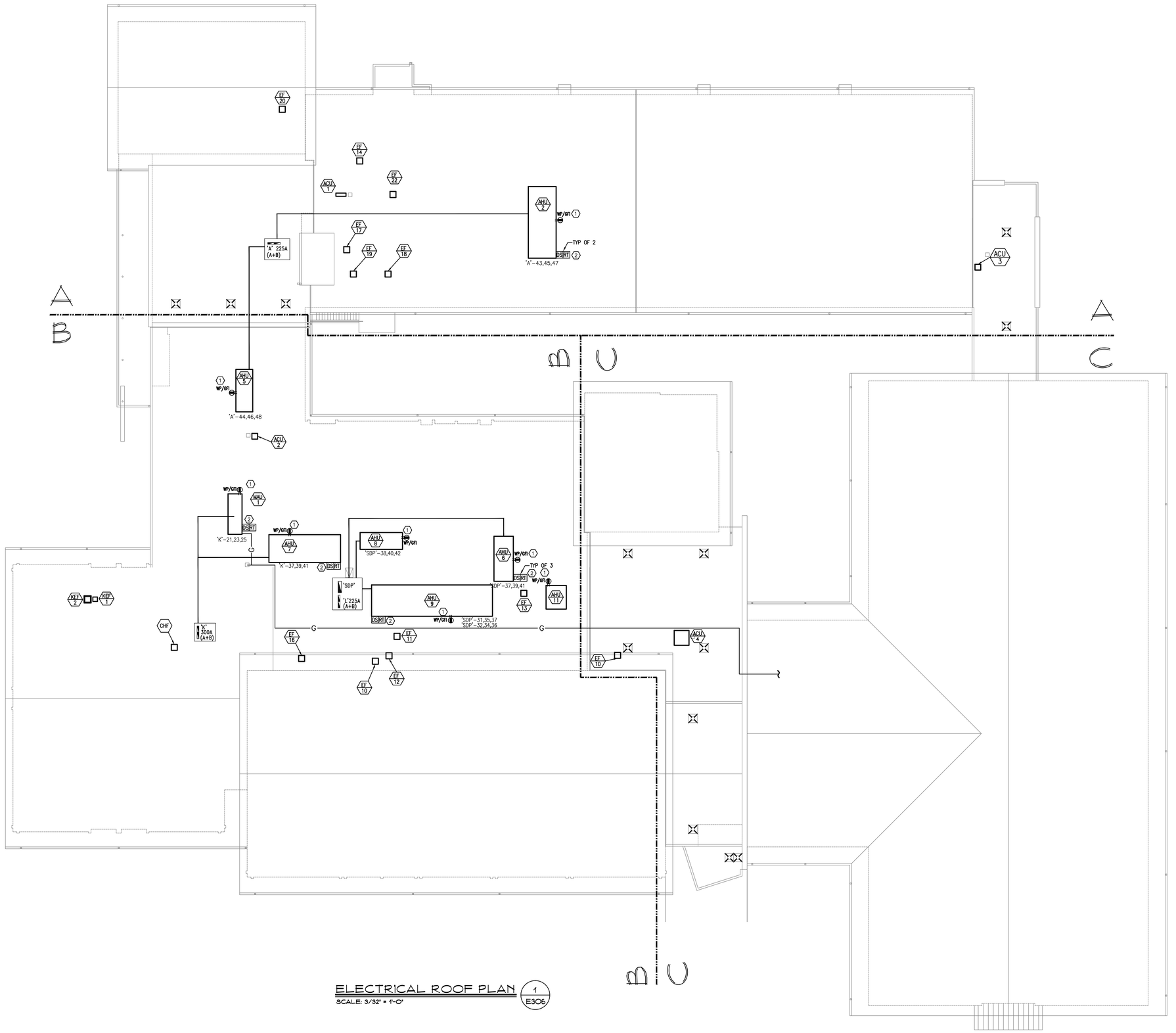
Revision:	Description:	Date:	Revised By:
--	ISSUED FOR BIDDING	NOV. 26, 2013	--

Drawing Title:

DETAILS

State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: AS NOTED
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E305

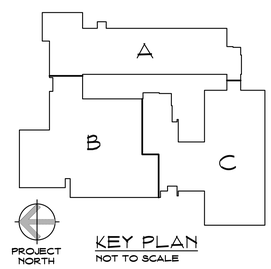


ELECTRICAL ROOF PLAN (1 / E306)

SCALE: 3/32" = 1'-0"

POWER PLAN NOTES

1. PROVIDE ROOF TOP WP/GFCI RECEPTACLE 120V/1P/20A, AS SHOWN ON THE POWER PLANS.
2. PROVIDE AND INSTALL DUCT SMOKE DETECTOR ON THE SUPPLY SIDE OF AHU's IF > 2000 NOMINAL CFM. COORDINATE EXACT LOCATION OF REMOTE TEST STATION FOR DUCT SMOKE DETECTOR WITH FIRE MARSHAL.



KEY PLAN
NOT TO SCALE

Project Title:
Expansion and Renovate as New Project - PHASE 1 of 3
Crystal Lake Elementary School
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Drawing Title:
ELECTRICAL ROOF PLAN
State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: 3/32" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E306

Luminaire Schedule

Project: 12.140 Crystal Lake ES – Ellington City, CT

Symbol	Qty	Height	Label	Arrangement	Lumens	LLF	Description
●-□	13	25 ft.	ST1	SINGLE	Absolute	0.95	GARDCO–PUREFORM P21–A1–1–3–130LA–CW
□-●-□	4	25 ft.	ST2	TWIN HEADS	Absolute	0.95	GARDCO–PUREFORM P21–A–2–4–130LA–CW
●-□	4	25 ft.	ST3	SINGLE	Absolute	0.95	GARDCO–PUREFORM P21–A1–1–4–130LA–CW
●	19	UNDER CANOPY	O		900	1.00	PHILIPS – LIGHTOLIER LYTECASTER 1050LRN09D1 – 1050LRNDLCDW
⊟	29	9 ft.	OSF		3200	0.85	GARDCO–PHILIPS LIGHTING 101–MT–(2)42TRF–120–BRP

SCHEDULE NOTES:

EXTERIOR LIGHTING CONTROL: PROVIDE BRANCH CIRCUITS SHOWN FOR POLE LIGHTING AND CONTACTOR TO BE CONTROLLED BY LIGHTING CONTROL PANEL. COORDINATE WITH PANEL INSTALLER. FINISHES WILL BE CONFIRMED BY ARCHITECT DURING SUBMITTALS.

CONNECT LIGHTING FIXTURES 'O' AND 'OSF' ON THE EMERGENCY "UL 924 RELAY". SEE DETAIL DRAWING FOR LIGHT POLE BASE DETAIL. REFER TO LIGHTING PLANS 'E100', 'E101', 'E102' FOR LOCATIONS AND SCHEMATIC DETAILS ON DRAWING 'E305'.

CONTRACTOR SHALL DISCONNECT, REMOVE AND DISPOSE OF EXISTING POLE LIGHTS AND BASES.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND.

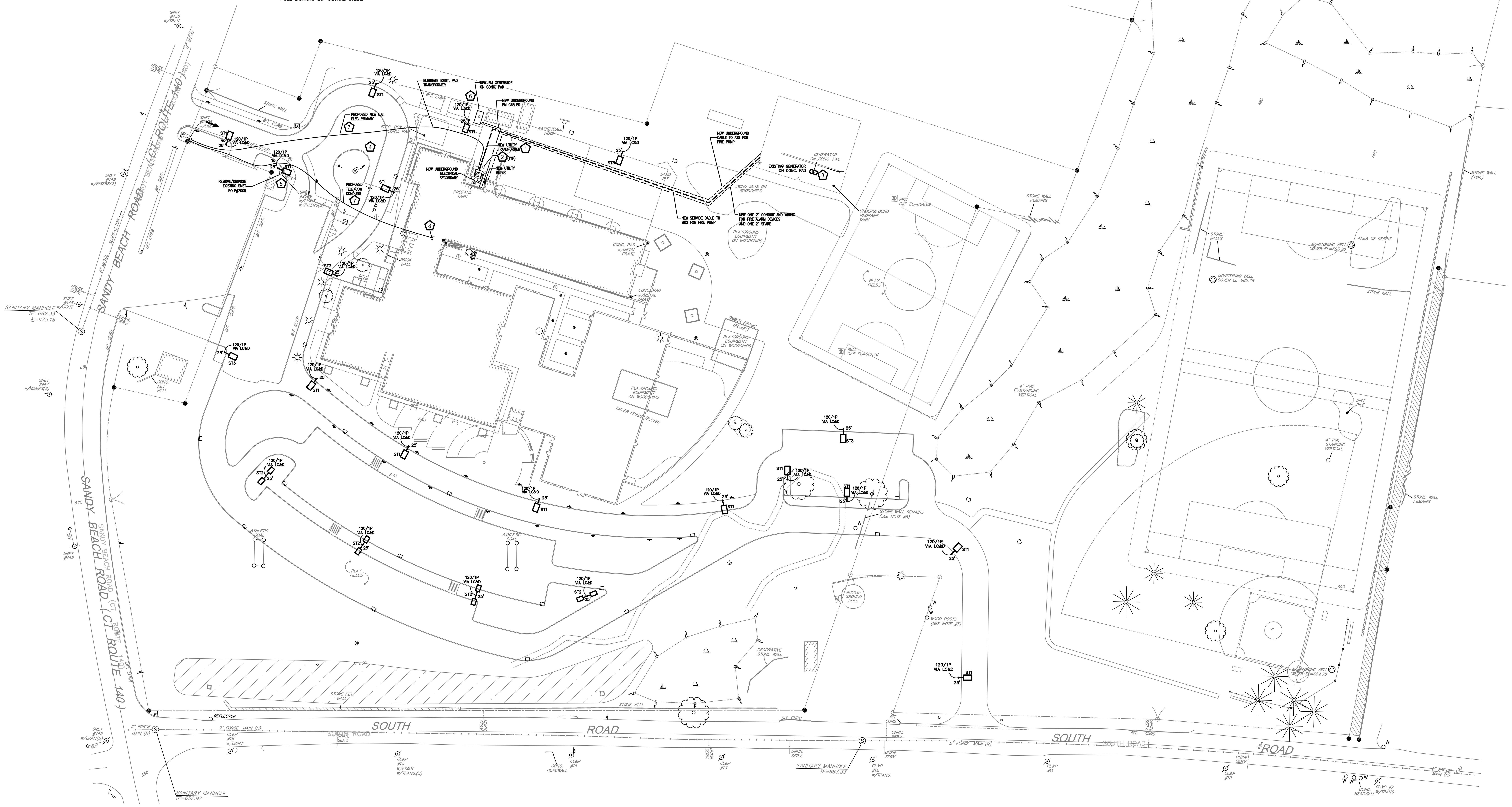
INSTALL NEW LIGHTING POLES AND DEDICATED BRANCH CIRCUITS TO THE LOCATION INDICATED IN THIS SITE PLAN. CONNECT TO 120V/1P PANEL VIA LIGHTING CONTROL PANEL, LOCATED IN THE MECHANICAL ROOM B123.

EXTERIOR BUILDING WALL/CANOPY LIGHTING FIXTURES TYPE 'OSF' AND 'O' TO BE ON LIGHTING CONTROL PANEL. REFER TO CONTROL SCHEMATIC ON DETAIL DRAWING "E305". SEE ARCHITECTURAL EXTERIOR ELEVATIONS FOR EXACT MOUNTING HEIGHT.

POLE LIGHTING 25' SQUARE STEEL.

ELECTRICAL NOTES:

1. THE UTILITY TRANSFORMER SHALL BE MOUNTED BETWEEN 5' TO 10 ' FROM THE EDGE OF PAVEMENT AND MINIMUM 2' FROM ANY SIDEWALK. COORDINATE WITH CL&P, THE UTILITY CO..
2. PROVIDE SAFETY BOLLARDS SIX-FOOT, FOUR INCH GALVANIZED STEEL CONDUIT FILLED WITH CONCRETE TWO(2) FEET BELOW GRADE AND FOUR(4) FEET ABOVE GRADE. COORDINATE WITH CL&P.
3. REMOVE/RELOCATE EXISTING EMERGENCY GENERATOR. COORDINATE PHASES WITH THE OWNER AND GC.
4. ELIMINATE THE EXISTING OVERHEAD TELE/COM CABLES.
5. ELIMINATE THE EXISTING SNET POLE #2008. COORDINATE WITH CL&P.
6. NEW GENERATOR PAD SIZE MUST COMPLY WITH GERERAC OR EQUAL MANUFACTURER. REFER TO CIVIL DRAWING 'C-601' FOR PAD DETAILS.
7. REFER TO ONE LINE DIAGRAM, DRAWING 'E301'. COORDINATE WITH CIVIL UTILITY PLAN 'C-500' FOR EXACT ROUTING.
8. CABLE ROUTING TO SMALL CHASE IN STORAGE ROOM A103.



SITE PLAN 1/E307
SCALE: 1" = 40'

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Expansion and Renovate as New Project - PHASE 1 of 3
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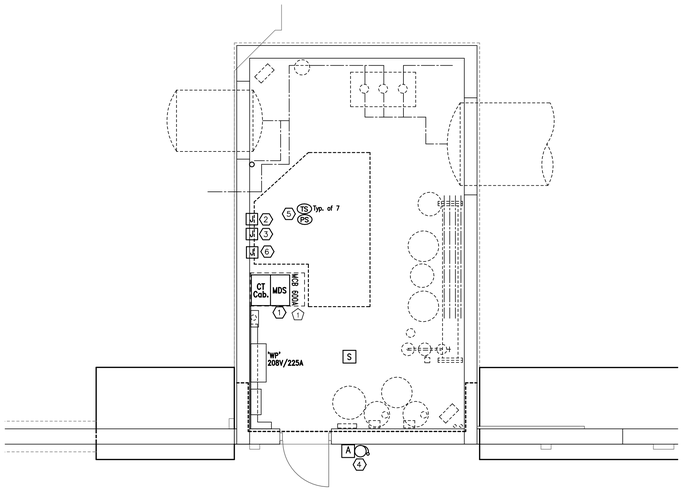
Drawing Title: SITE PLAN

State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: AS NOTED
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E307



ELECTRICAL PLAN NOTES

1. CABINET HOUSING MAIN SWITCH & CT METERING CABINET FOR NEW 30 HP FIRE PUMP. USE CUTLER-HAMMER: POW-R-LINE C TYPE 'WWCMS' OR EQUAL.
2. PROVIDE 120V/1P/20A JUNCTION BOX, WIRES AND CONDUIT, FOR SIEMENS TANK LEVEL ALARM ANNUNCIATOR PANEL FROM EXISTING ROOM ELECTRICAL PANEL 'WP'.
3. PROVIDE 120V/1P/20A JUNCTION BOX, WIRES AND CONDUIT FOR TANK LEVEL MONITORING PANEL FROM EXISTING ROOM ELECTRICAL PANEL 'WP'.
4. PROVIDE FEEDER FOR ELECTRICAL ALARM BELL FROM SPRINKLER VALVE LOCATED IN WELL EQUIPMENT BUILDING.
5. PROVIDE FIRE ALARM MODULES FOR EACH FIRE PROTECTION TAMPER AND PRESSURE SWITCH. COORDINATE QTY AND LOCATION WITH FIRE PROTECTION CONTRACTOR DIV. 21 AND FIRE MARSHAL. WIRE TO FIRE ALARM SYSTEM.
6. PROVIDE CONDUIT AND WIRES FOR 1/2HP JOCKEY PUMP FROM EXISTING ELECTRICAL PANEL 'WP'. COORDINATE LOCATION AND DETAIL OF PUMP WITH DIV. 21. PROVIDE NEW 20A/3P CIRCUIT BREAKER IN THE PANEL.

PHASE 1

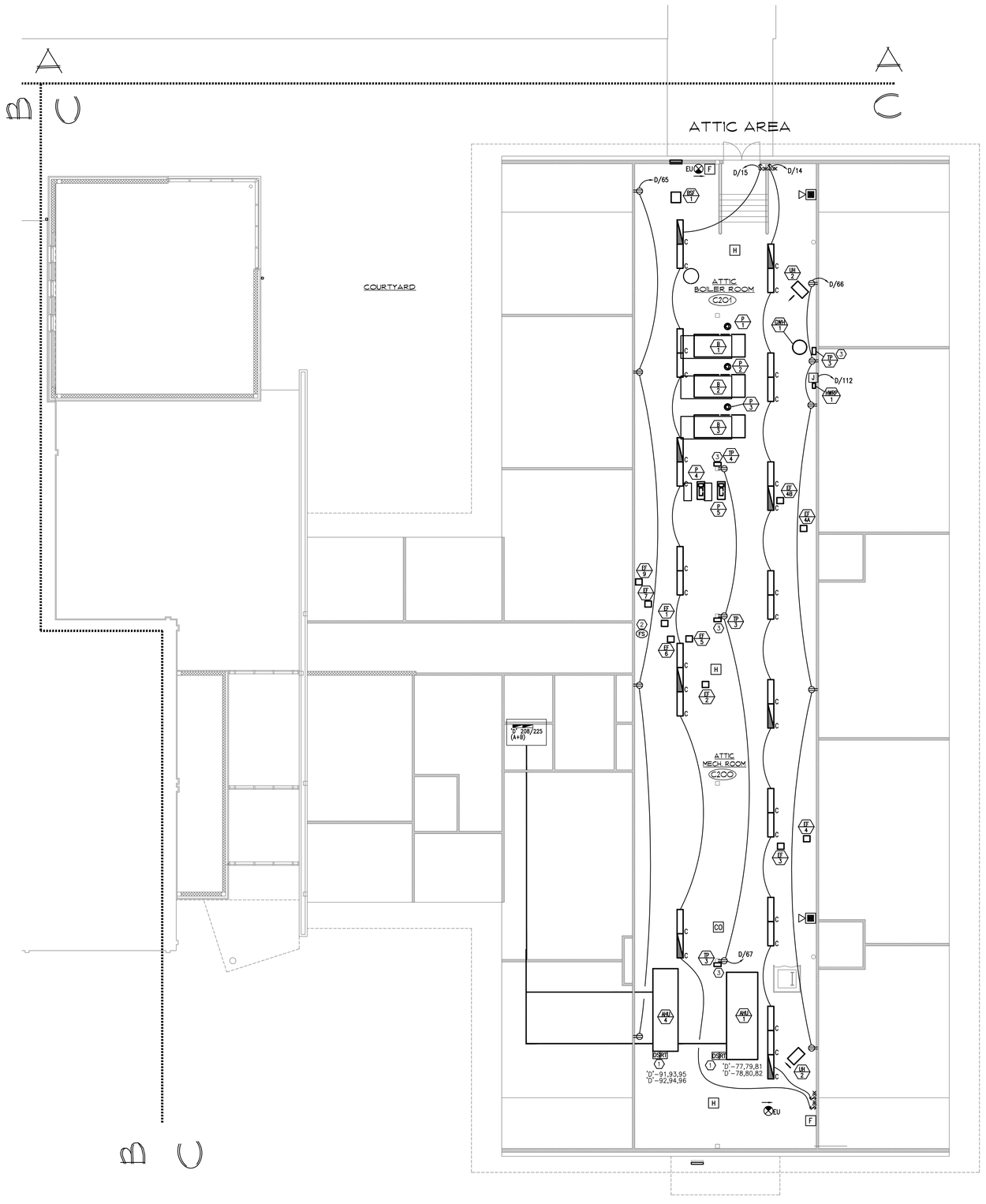
ELECTRICAL NOTES:

1. PROVIDE NEW SERVICE FOR WELL EQIPMENT BUILDING IN PHASE I FOR POWER TO FIRE PUMP. NEW FA DEVICES IN THE WELL EQUIPMENT ROOM SHALL BE INSTALLED IN PHASE 1 (MONITORING FIRE PUMP, ETC.).

ELECTRICAL EQUIPMENT BUILDING PLAN

SCALE: 1/4" = 1'-0"

2 / E308



NORTH

ELECTRICAL ATTIC

SCALE: 1/8" = 1'-0"

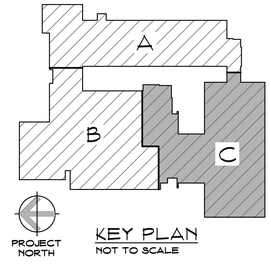
1 / E308

ELECTRICAL PLAN NOTES

1. PROVIDE AND INSTALL DUCT SMOKE DETECTOR ON THE SUPPLY SIDE OF AHU's IF > 2000 NOMINAL CFM. COORDINATE EXACT LOCATION OF REMOTE TEST STATION FOR DUCT SMOKE DETECTOR WITH FIRE MARSHAL.
2. PROVIDE FIRE ALARM MODULES FOR EACH FIRE PROTECTION TAMPER, FLOW AND PRESSURE SWITCH. COORDINATE QTY AND LOCATION WITH FIRE PROTECTION CONTRACTOR AND FIRE MARSHAL. WIRE TO FIRE ALARM SYSTEM.
3. AUTOMATIC ELECTRONIC TRAP PRIMING ASSEMBLY FOR 1-4 TRAP SERVICE PROVIDED WITH 6-FT ELECTRICAL CORD. REFER TO PLUMBING SCHEDULE DRAWING 'P105'. COORDINATE WITH DIV. 23.

ELECTRICAL CONTRACTOR SHALL PROVIDE ON EACH SWITCH AREA AN UL-924 EMERGENCY LIGHTING RELAY (WIRED TO AN EMERGENCY CIRCUIT FROM THE EMERGENCY PANEL 'EM' LOCATED IN THE BASEMENT ROOM A001), TO CONTROL SHADED FIXTURES. REFER TO DETAILS ON DRAWING 'E305'.

REFER TO DRAWING 'E300' FOR ELECTRICAL SYMBOL LEGEND.



KEY PLAN
NOT TO SCALE

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Drawing Title:
Electrical Attic & Equipment Building Plan
State Project Number: 048-0058 EA/RR/PS

Date: JUNE 18, 2013
Scale: 1/8" = 1'-0"
Drawn By: MS-ELE ENG
Project Number: 12.140
Drawing Number: E308